DJ-S41T/T2/(J)/(C)
EC10
DJ-S11T/E

Service Manual

CONTENTS

ALINCO, INC.

SPECIFICATIONS

1) General

	DJ-S41T/ T2 / (J) / (C) & EC10	DJ-S11T/ E
Frequency Range :	430.000~449.995MHz (T Version)	144.000~147.995MHz (T Version)
	450.000~470.000MHz (T2 Version)	144.000~145.995MHz (E Version)
	430.000~439.995MHz (J Version)	
	433.050~434.790MHz (C Version & EC10)	
Modulation :	F3E	F3E
DC Power Source :	3.6~4.5 Volts DC (internal battery)	3.6~4.5 Volts DC (internal battery)
	5.5V (external regulated source)	5.5V (external regulated source)
Current Consumption :	TX/approx. 30mA(@5.5V DC) (C Version & EC10)	TX/approx. 260mA(Hi Power @5.5V DC)
	280mA(Hi Power @5.5V DC) (T,J Version)	
	RX/approx. 33mA (squelched)	RX/approx. 33mA (squelched)
Dimensions :	55(W)×100(H) ×28(D)mm without projections	55(W) ×100(H) ×28(D)mm without projections
Weight :	approx. 185g (with three AA drycells)	approx. 185g (with three AA drycells)

2) Transmitter

Output Power :	approx. 10mW(with 5.5V DC supply)(C Version & EC10)	approx. 340mW(with 5.5V DC supply)
	approx. 340mW(with 5.5V DC supply)(T,J Version)	
	approx. 300mW(with 5.5V DC supply)(T2 Version)	
Modulator :	Variable Reactance	Variable Reactance
Max.Deviation :	±5kHz	±5kHz

3) Receiver

Configuration :	Double Conversion Superheterodyne	Double Conversion Superheterodyne
Intermediate Frequency :	First : 23.05MHz/Second : 450kHz	First : 23.05MHz/Second : 450kHz
Sensitivity :	Better than -15dBμ (12dB SINAD)	Better than -15dBμ (12dB SINAD)
AF Output :	Not less than 100mW (@10% distortion @8Ω)	Not less than 100mW (@10% distortion @8Ω)

Note : Specifications are subject to change without notice or obligation

CIRCUIT DESCRIPTION

1) Receiver System

The receiver system is the double superheterodyne.
The first IF is 23.05MHz and the second IF is 450kHz.

1. Front End

The signal from the antenna is passed through a low-pass filter and input to RF coil L21.
The signal from L21 is amplified by Q10, Q12 and led to the band pass filter, and led to the first mixer base of Q7.

2. First Mixer

The amplified signal (f0) by Q10, Q12* is mixed with the first local oscillator signal (f0-23.05MHz) from the PLL circuit by the first stage mixer Q7 and so is converted into the first IF signal.
The unwanted frequency band of the first IF signal is eliminated by the monolithic crystal filter FL1, and led to IF amplifier Q9.

3. IF Circuit

The first IF signal is amplified by Q9, and input to pin16 of IC2, where it is mixed with the second local oscillator signal (22.6* or 23.5MHz) and so is converted into the second IF signal (450kHz).
The second IF signal is output from pin3 of IC2, and unwanted frequency band of second IF signal is eliminated by a ceramic filter FL2.
The resulting signal is then amplified by the second IF limiting amplifier, and detected by quadrature circuit. The audio signal is output from pin9 of IC2.

4. Audio Circuit

The detected signal from IC2 is passed through the low-pass filter and led to the amplifier Q307, Q306.
Q308 is switched ON/OFF by AFC signal from CPU.
The audio signal is input to the main volume VR301 and amplified by the power amplifier IC302 to drive the speaker.
The power supply voltage of IC302 is limited by AF regulator consisting of Q304.
The power supply voltage of IC302 is switched ON/OFF by AFP signal from CPU.

5. Squelch Circuit

The noise in the audio signal from IC2 is passed through the squelch control variable resistor RT2 and input pin8 of IC2.
IC2 includes filter amplifier, high-pass filter and rectifier.
When squelch circuit is close, pin13 of IC2 goes to "High".
When squelch circuit is open or a signal is received, pin13 of IC2 goes to "Low", then the signal of pin13 is led to CPU.

* for S41 only.

2) PLL, VCO Circuit

Output frequency of PLL circuit is set by the serial data from microprocessor.
PLL circuit consists of VCO Q101, buffer amplifier Q102.
The pulse wave output of charge pump is converted to DC voltage by PLL loop filter circuit, and supplied to D102, D103 of varicap diode in VCO unit.
The frequency modulation is executed when audio signal voltage is supplied to the varicap D104.
When PLL is unlocked, pin7 of IC1 goes to "High".

3) Transmitter System

1. Microphone Amplifier

The voice from the internal or external microphone is led to the pre-emphasis circuit, and then input to the microphone amplifier IC301, which consists of two operational amplifiers.
The amplified is signal is input to the low-pass filter IC301.
The output from the microphone amplifier is passed through variable resistors RT301 for modulation adjustment to varicap diode of the VCO.

2. Power Amplifier

The signal from VCO is passed through Tx/Rx switch circuit D3.
The signal is amplified by Q4 and Q5, and input to power amplifier Q2, Q3, Q6, and then passed through the low-pass filter, the antenna switch circuit and the output low-pass filter.
The unwanted harmonics frequency signal is eliminated by the low-pass filter and input to the antenna.

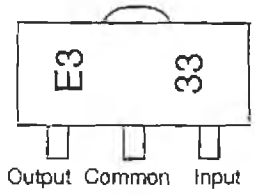
4) Terminal function of CPU

No.	Name	I/O	Description	H	L
1	UPK	I	Frequency UP key input		Active
2	DOWNK	I	Frequency DOWN key input		Active
3	TX LOW	O	TX output power switch High/Low	Low power	High power
4	NC	-	No Use		
5	LB	I	Low voltage detection input		
6	RXC	O	Power supply control for RX		Active
7	SMT (CAS)	I	S meter signal input		
8	SD	I	SD signal input		Active
9	EECLK	O	EEPROM clock output		
10	EEDATA	O	EEPROM data output		
11	CBEEP	O	No use		
12	BEEP	O	Beep sound output		
13	LBSW	O			
14	BP1	I	Band plan 1 input		
15	BP2	I	Band plan 2 input		
16	PSTB	O	PLL IC strobe output		
17	DATA	O	PLL IC data output		
18	CLK	O	PLL IC clock output		
19	TXD	O	Clone TX data output		
20	RXD	I	Clone RX data input		
21	TXC	O	Power supply control for TX output		Active
22	CLO	O	Power supply control for Clone output	Normal	Clone
23	TXA	O	Switches VCO output to TX		Active
24	UL	I	PLL unlock signal input	Active	
25	RESET	I	CPU reset input	at work	on reset
26	PLLC	O	Power supply control for VCO output		Active
27	LAMP	O	Lamp ON/OFF output		Active
28	X IN	I	Internal oscillator input		
29	X OUT	O	Internal oscillator output		
30	Vss	I	GND		
31	CALLK	I	Call key input		Active
32	SCANK	I	Scan key input		Active
33	VMK	I	V/M key input		Active
34	LAMPK	I	Lamp key input		Active
35	FK	I	Function key input		Active
36	MONIK	I	Moni key input		Active
37	SHIFTC	O	VCO shift output		
38	M.MUTE	O	Microphone mute output	Active	

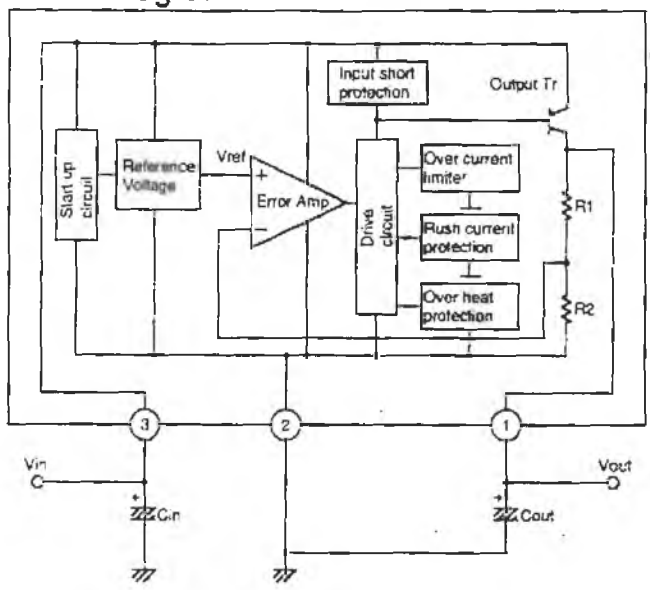
No.	Name	I/O	Description	H	L
39	AFP	O	Power supply control for AF amp		Active
40	AFC	O	AF mute		Active
41	TONE5	O	Sub tone signal output		
42	TONE4	O	Sub tone signal output		
43	TONE3	O	Sub tone signal output		
44	TONE2	O	Sub tone signal output		
45	TONE1	O	Sub tone signal output		
46	TONE0	O	Sub tone signal output		
47	PTTK	I	PTT key input		
48	REF	I	PLL reference select	22.6MHz	23.5MHz
49	OPEN	-	No use		
50	OPEN	-	No use		
51	OPEN	-	No use		
52	OPEN	-	No use		
53	OPEN	-	No use		
54	OPEN	-	No use		
55	OPEN	-	No use		
56	S14	O	LCD SEG14		
57	S13	O	LCD SEG13		
58	S12	O	LCD SEG12		
59	S11	O	LCD SEG11		
60	S10	O	LCD SEG10		
61	S9	O	LCD SEG9		
62	S8	O	LCD SEG8		
63	S7	O	LCD SEG7		
64	S6	O	LCD SEG6		
65	S5	O	LCD SEG5		
66	S4	O	LCD SEG4		
67	S3	O	LCD SEG3		
68	S2	O	LCD SEG2		
69	S1	O	LCD SEG1		
70	S0	O	LCD SEG0		
71	Vcc	I	Power supply terminal 3V		
72	VREF	I	A/D reference level 3V		
73	GND	I	Analog ground		
74	COM3	O	LCD COM3		
75	COM2	O	LCD COM2		
76	COM1	O	LCD COM1		
77	COM0	O	LCD COM0		
78	VL3	O	LCD power supply		
79	VL2	O	LCD power supply		
80	VL1	O	LCD power supply		

SEMICONDUCTOR DATA

1) AN77L03M (XA0230)
Voltage Regulator

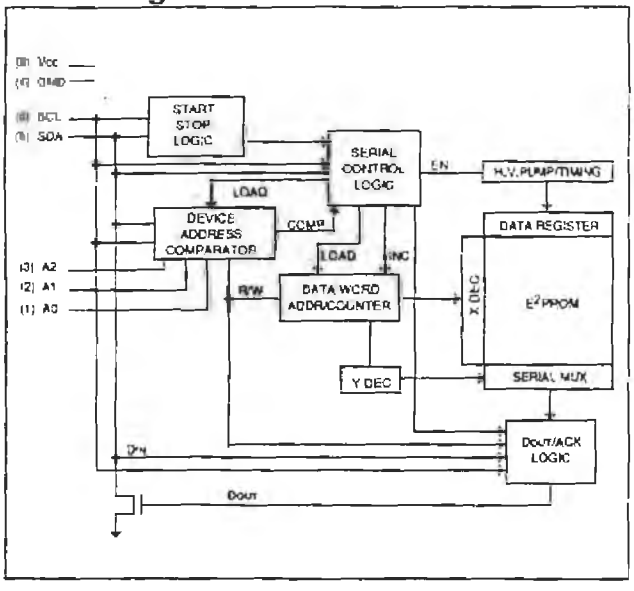


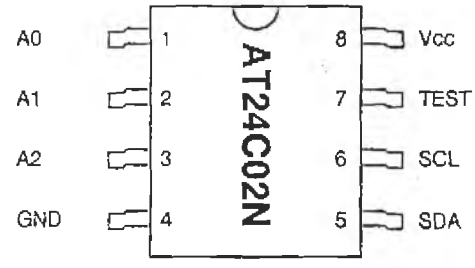
Block Diagram



2) AT24C02N (XA0364)
CMOS Serial EEPROM

Block Diagram

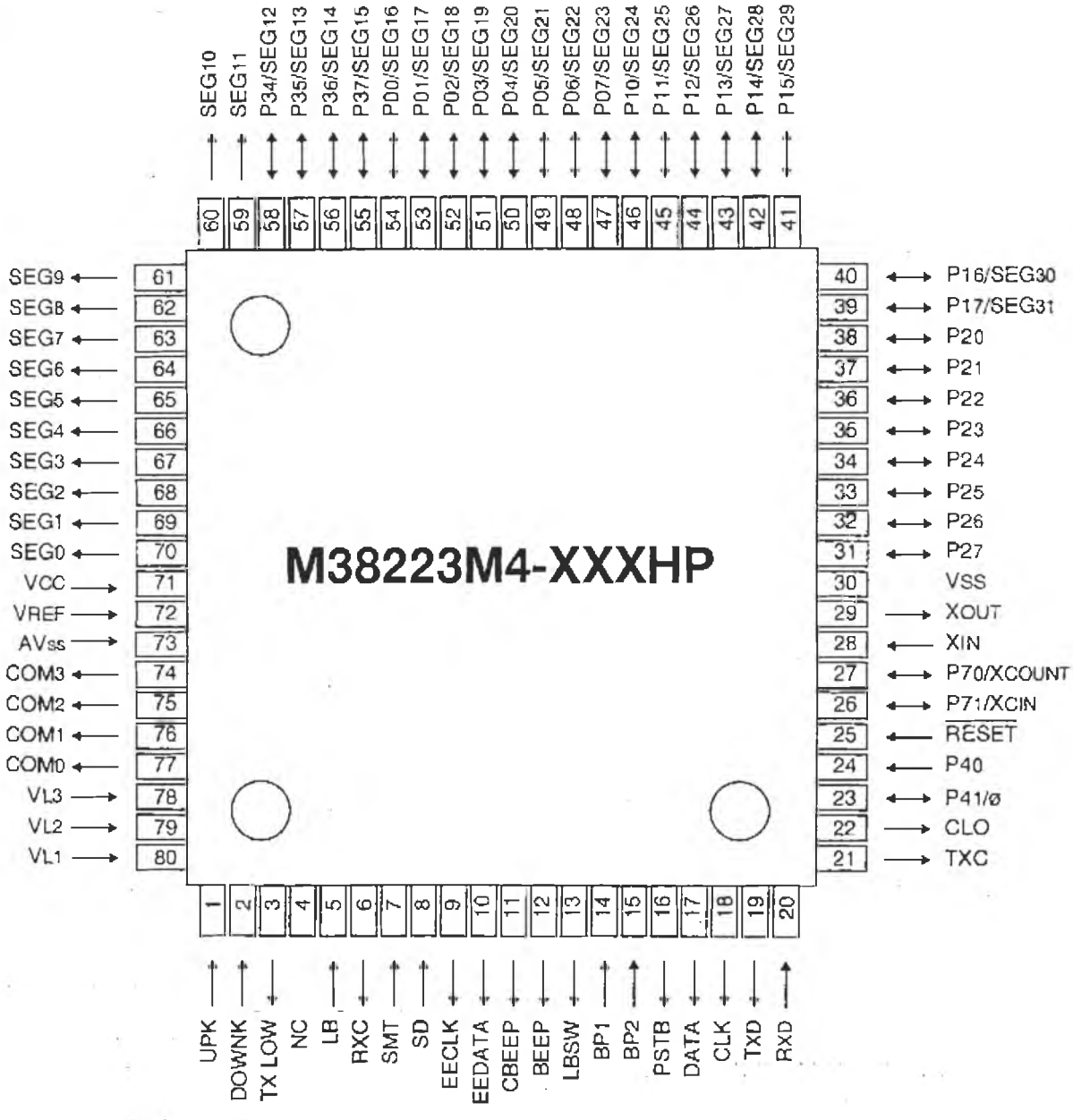




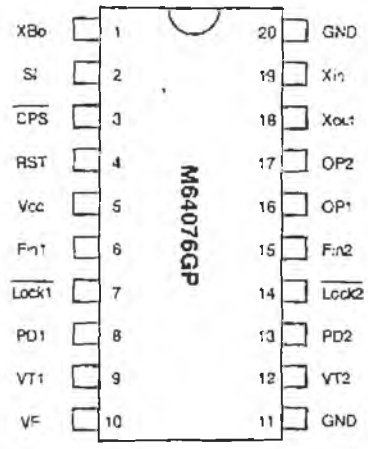
Pin Configurations

Pin Name	Function
A0 to A2	Address Inputs
SDA	Serial Data
SCL	Serial Clock
Test	Test Input (GND or Vcc)
NC	No Connect

3) M38223M4HP (XA0470)
CPU

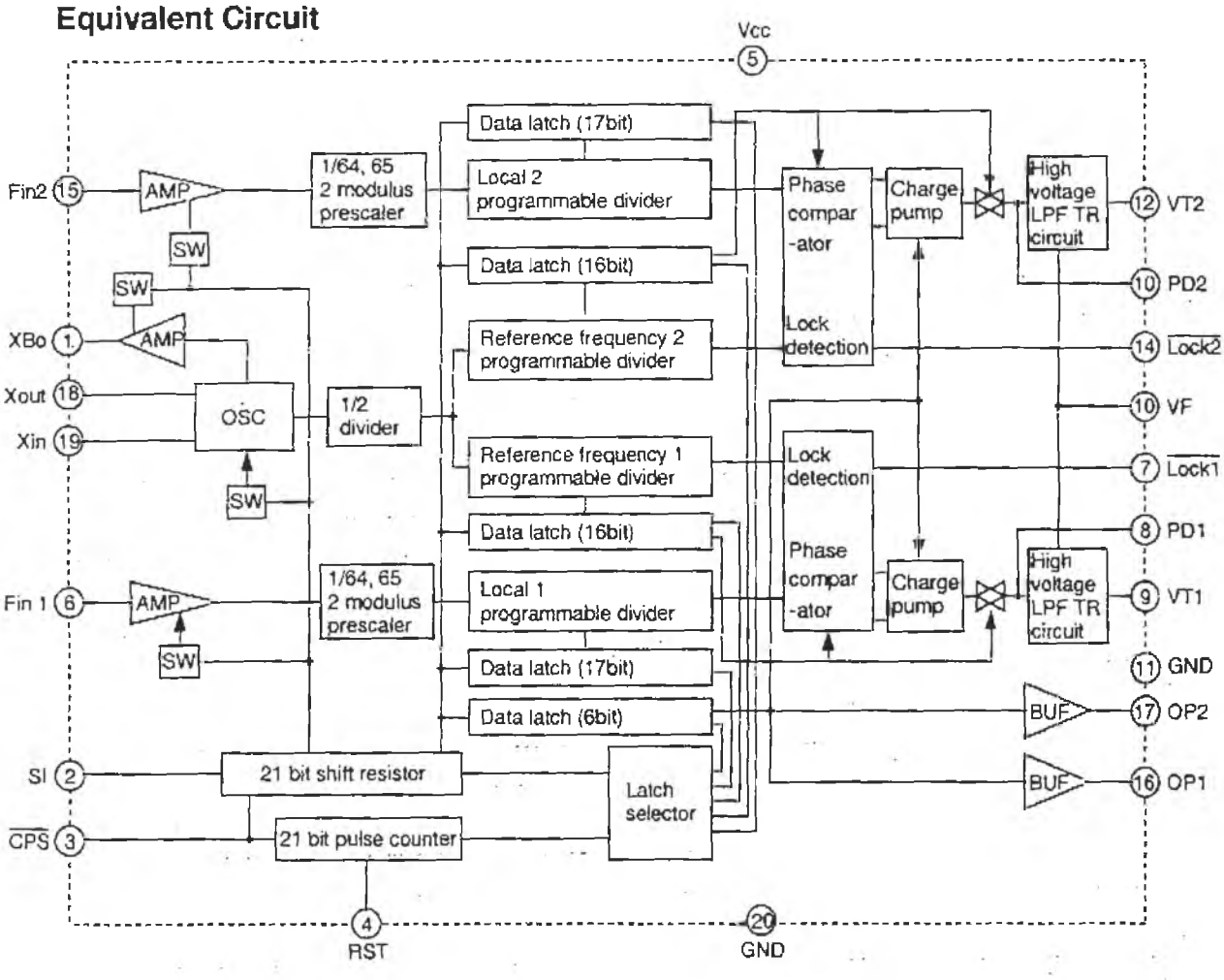


4) M64076GP (XA0352)
Dual PLL Synthesizer



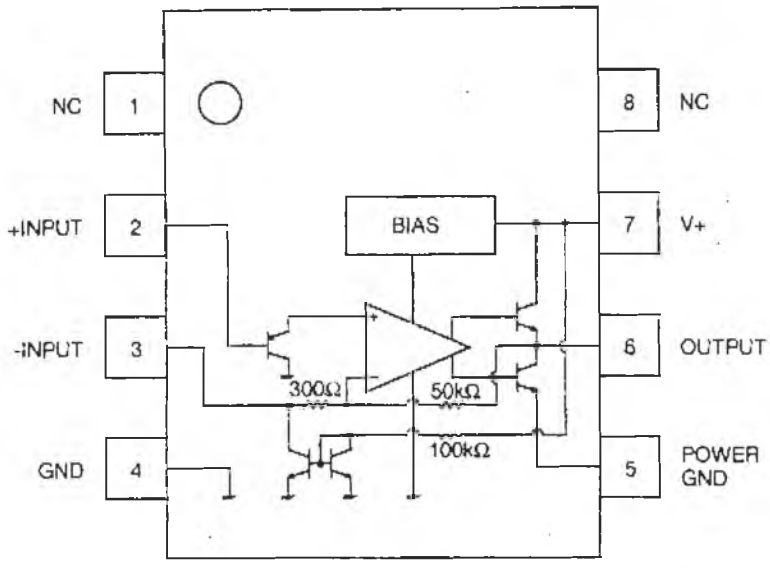
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc	Fin=80–520MHz Vin=-10dBm	2.7	-	5.5	V
LPF supply voltage	VF		-	9	12	V
Local oscillator input level	Vin	Fin=80–520MHz Vcc=2.7–5.5V	-20	-	-4	dBm
Local oscillator input frequency	Fin	Vin=-20–-4dBm Vcc=2.7–5.5V	80	-	520	MHz
Xin input level	Vxin	Vcc=2.7–5.5V Fxin=10–25MHz Sine wave	0.4	-	1.4	Vp-p
Xin input frequency	Fxin	Vcc=2.7–5.5V Vxin=0.4–1.4Vp-p	10	-	25	MHz

Equivalent Circuit



5) NJM2070M (XA0210)
Low Voltage Power Amplifier

Equivalent Circuit

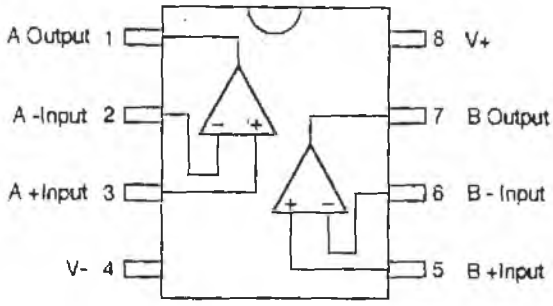


V+=6V, Ta=25+/-2°C

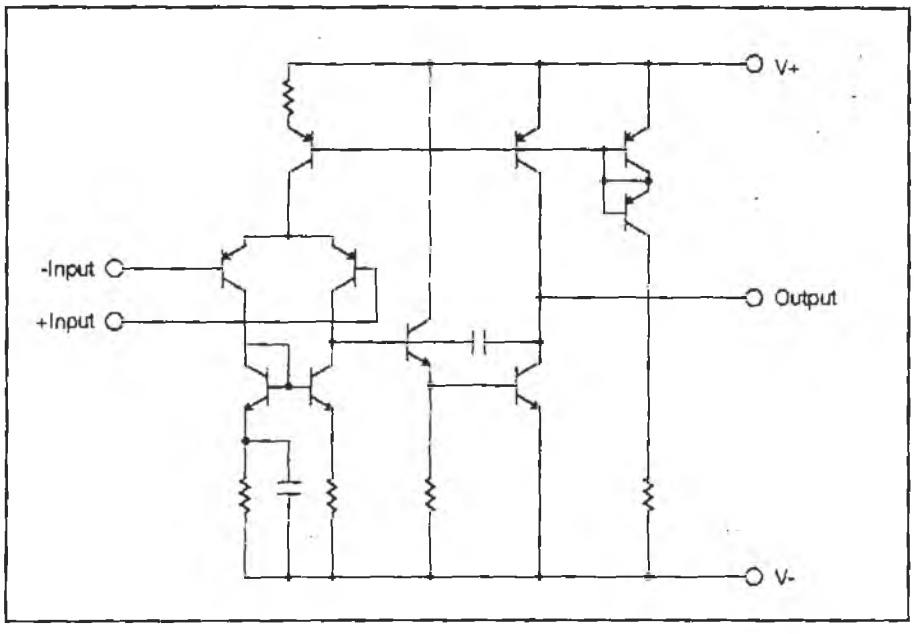
Parameter	Condition		Symbol	Min.	Typ.	Max.	Unit
Supply voltage			V+	1.8	-	15	V
Idle current	RL=∞		IQ	-	4	7	mA
Output voltage			Vo	-	2.7	-	V
Input bias current			IB	-	200	-	nA
Output power	THD=10%, f=1kHz	V+=6V, RL=4Ω	Po	0.5	0.6	-	W
		V+=4.5V, RL=4Ω		-	0.32	-	W
		V+=3V, RL=4Ω		-	120	-	mW
		V+=2V, RL=4Ω		-	30	-	mW
	THD=1%, f=1kHz	V+=6V, RL=4Ω		-	500	-	mW
		V+=4.5V, RL=4Ω		-	250	-	mW
Distortion	Po=0.4W, RL=4Ω,	f=1kHz	THD	-	0.25	-	%
Voltage gain	f=1kHz		Av	41	44	47	dB
Input impedance	f=1kHz		ZIN	100	-	-	kΩ
Equivalent input noise voltage	Rs=10kΩ	A curve	Vn1	-	2.5	-	μV
		B=22Hz to 22kHz	Vn2	-	3	-	μV
Power supply voltage rejection ratio	f=100Hz, Cx=100μF		SVR	24	30	-	dB
Power gain band width (-3dB)	RL=8Ω, Po=250mW		P.B	-	200	-	kHz

6) NJM2100M (XA0209)

Dual Operational Amplifiers



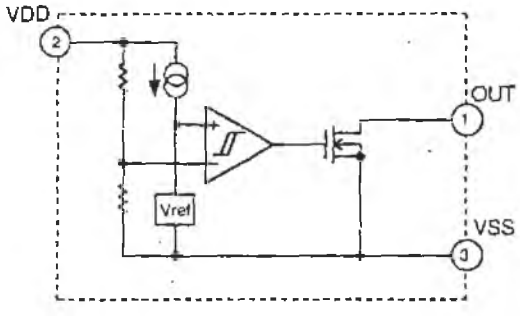
Equivalent Circuit

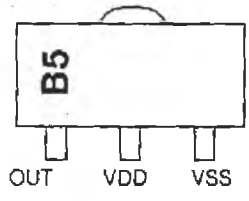


7) RN5VL25AA-T1 (XA0309)

C-MOS Voltage Detector

Equivalent Circuit

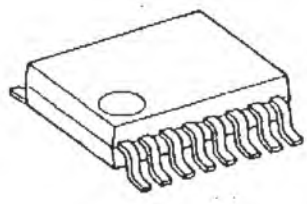




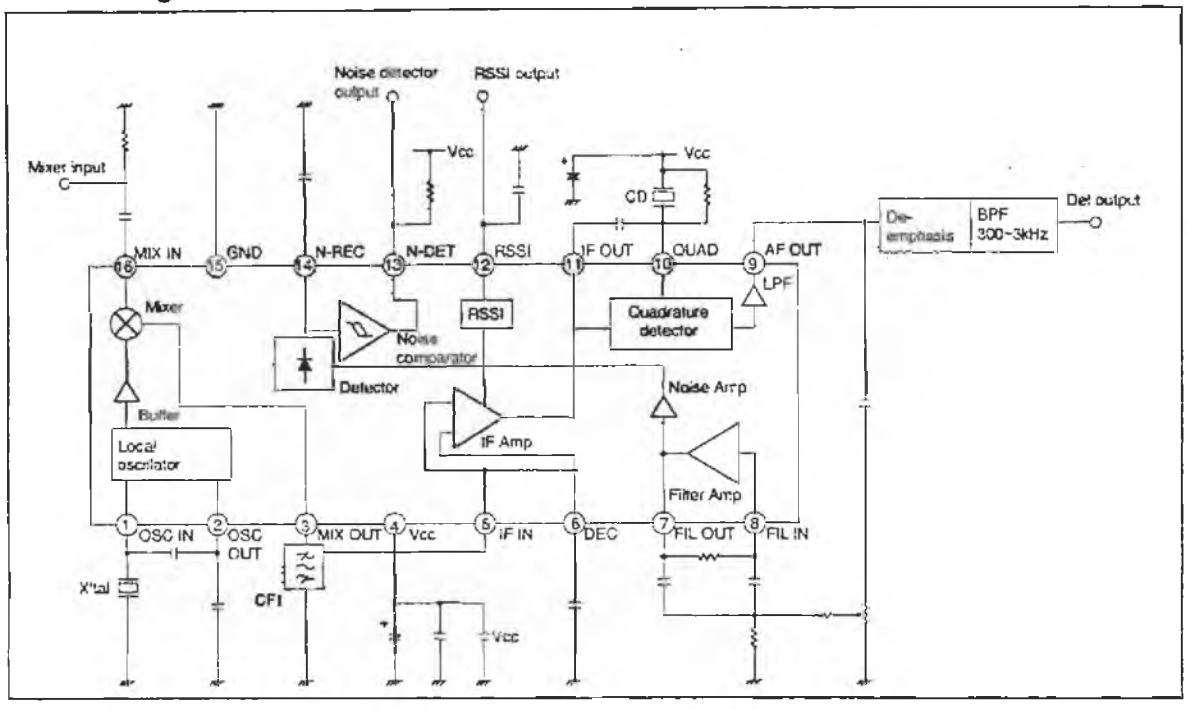
RL5VL25AA

8) TA31136FN (XA0404)

Low Power FM IF



Block Diagram



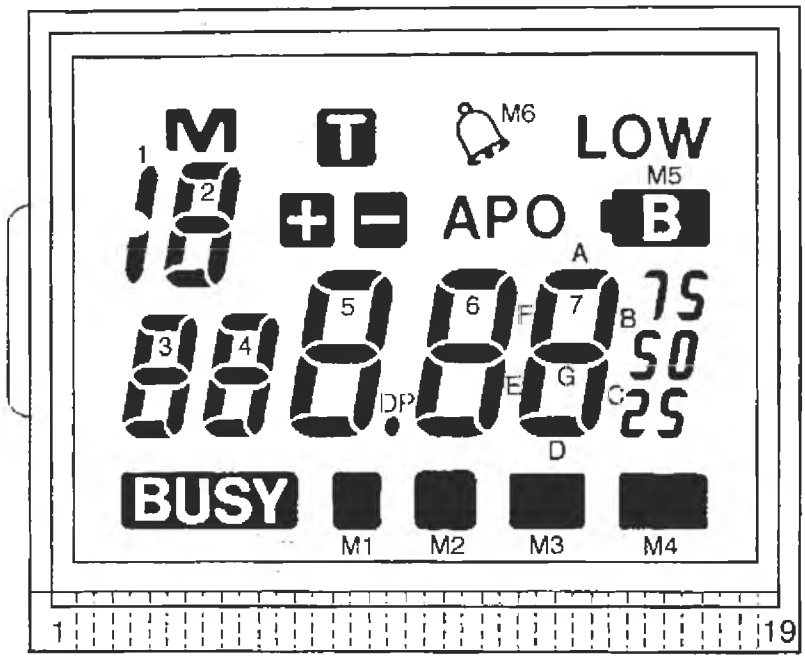
9) Transistor, Diode and LED Outline Drawings

Top View

1SS356	1SV237	1SV239	1SV257	MA111	SML-110MT	SML-310UT	U1GWJ44
XD0272	XD0141	XD0236	XD0293	XD0290	XL0037	XL0035	XD0225
	BB	TC	TB	1B			GW
2SA1576	2SC3356	2SC4081	2SC4213A	2SC4226	2SC5065	UN511H	UN2122
XT0094	XT0142	XT0095	XT0105	XT0141	XT0137	XU0166	XU0167
C FR B E	C R25 B E	C BR B E	C AA B E	C R24 B E	C MAO B E	C 6P B E	C 7B B E
UN5214	XN111M	XD0134					
XU0052	XU0046	HVU359					
C 8D B E	B2 E B1 EK C2 C1	S					

10) LCD

LCD Pattern

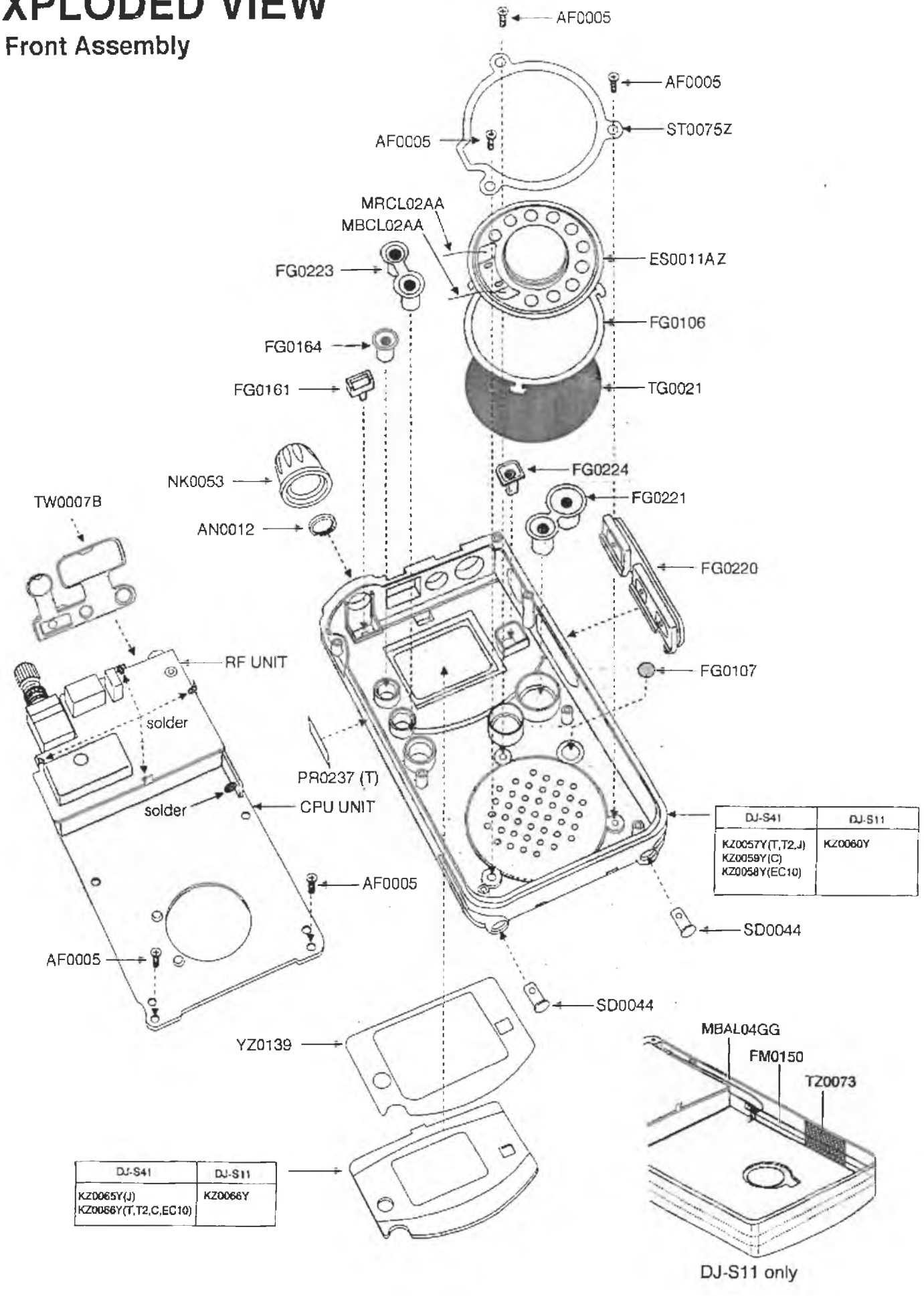


LCD connection table

No.	COM1	COM2	COM3	COM4
1	COM1	-	-	-
2	-	COM2	-	-
3	-	-	COM3	-
4	-	-	-	COM4
5	⊟	⊞	T	M
6	2E	2G	2F	1B, C
7	2C	2B	2A	2D
8	APO	M5	LOW	M6
9	3F	3G	3E	BUSY
10	3A	3B	3C	3D
11	4F	4G	4E	M1
12	4A	4B	4C	4D
13	5F	5G	5E	M2
14	5A	5B	5C	5D
15	6F	6G	6E	DP
16	6A	6B	6C	6D
17	7F	7G	7E	M3
18	7A	7B	7C	7D
19	75	50	25	M4

EXPLODED VIEW

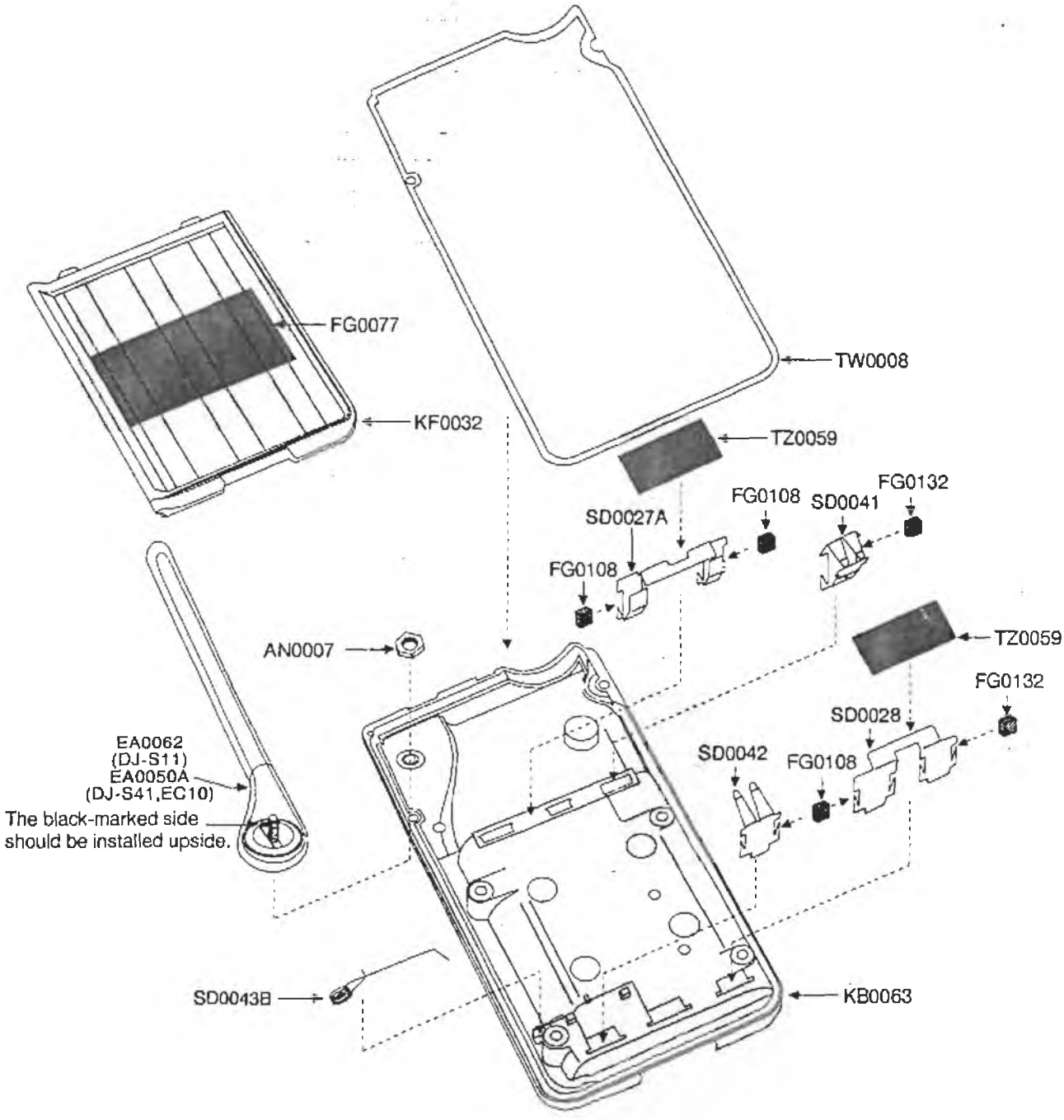
1) Front Assembly



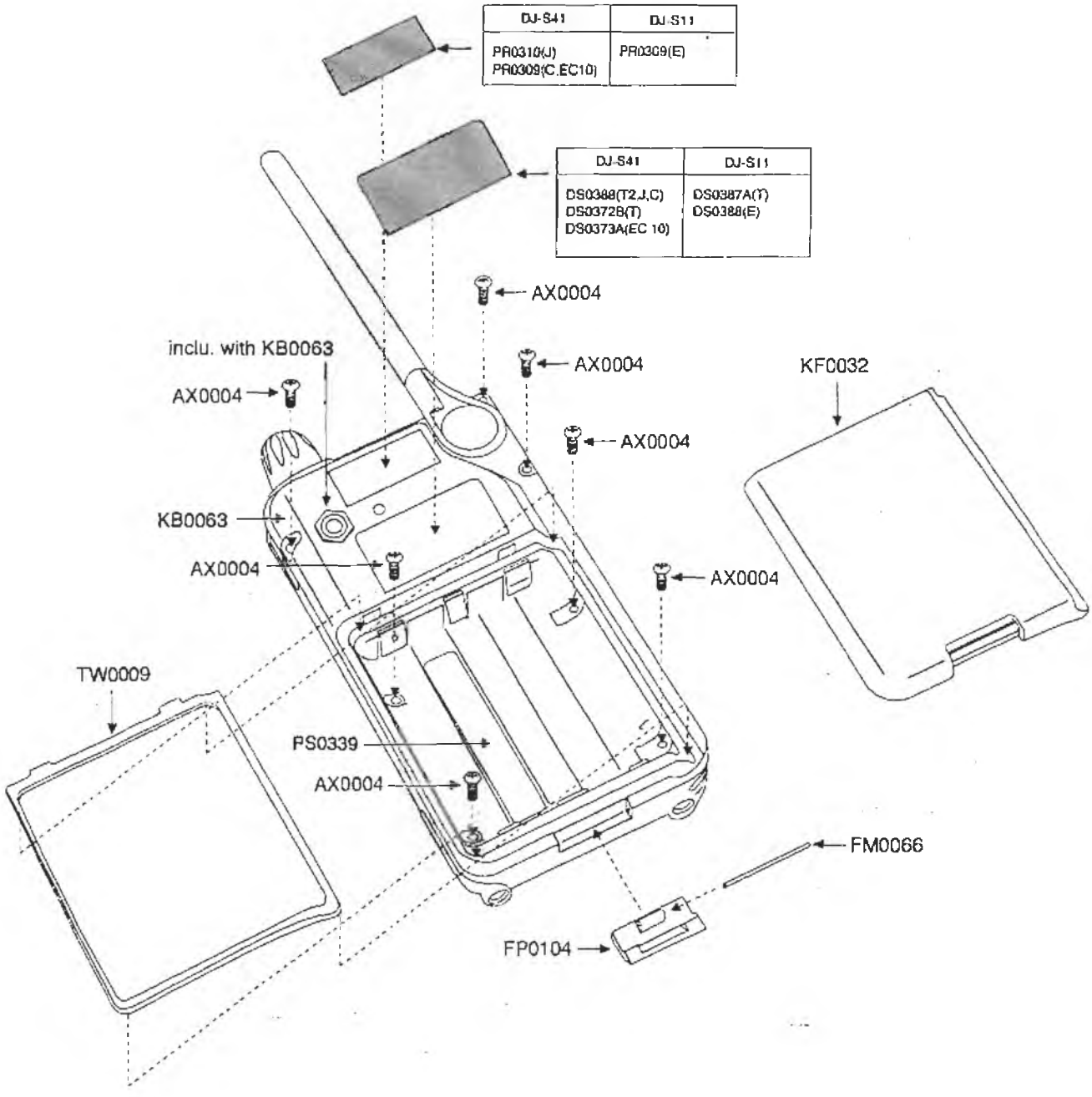
DJ-S41	DJ-S11
KZ0057Y(T,T2,J) KZ0059Y(C) KZ0058Y(EC10)	KZ0060Y

DJ-S41	DJ-S11
KZ0065Y(J) KZ0066Y(T,T2,C,EC10)	KZ0066Y

2) Rear Assembly 1



3) Rear Assembly 2



PARTS LIST

For DJ-S41T/T2/(J)/(C) & EC10

RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
		RF Unit		
C1	CU3035	Chip C. .	C1608JB1H102KTA	
C2	CU3035	Chip C.	C1608JB1H102KTA	
C3	CU3035	Chip C. .	C1608JB1H102KTA	
C4	CU3035	Chip C. .	C1608JB1H102KTA	
C5	CU3035	Chip C. .	C1608JB1H102KTA	
C6	CU3035	Chip C. .	C1608JB1H102KTA	
C7	CU3035	Chip C. .	C1608JB1H102KTA	
C8	CU3035	Chip C. .	C1608JB1H102KTA	
C9	CU3035	Chip C. .	C1608JB1H102KTA	
C10	CU3035	Chip C. .	C1608JB1H102KTA	
C11	CU3035	Chip C. .	C1608JB1H102KTA	
C12	CU3035	Chip C. .	C1608JB1H102KTA	
C13	CU3007	Chip C. .	C1608CH1H050CTA	
C14	CU3035	Chip C. .	C1608JB1H102KTA	
C15	CU3009	Chip C. .	C1608CH1H030CTA	
C16	CU3035	Chip C. .	C1608JB1H102KTA	
C17	CU3007	Chip C. .	C1608CH1H050CTA	
C19	CU3023	Chip C. .	C1608CH1H101JTA	
C22	CU3006	Chip C. .	C1608CH1H060CTA	
C23	CU3008	Chip C. .	C1608CH1H070CTA	
C24	CU3004	Chip C. .	C1608CH1H020CTA	
C25	CU3011	Chip C. .	C1608CH1H100CTA	
C26	CU3006	Chip C. .	C1608CH1H060CTA	
C27	CU3035	Chip C. .	C1608JB1H102KTA	
C28	CU3035	Chip C. .	C1608JB1H102KTA	
C29	CS0236	Chip Tantal	TMCMA0J685MTR	
C30	CU3035	Chip C. .	C1608JB1H102KTA	
C31	CU3047	Chip C. .	C1608JB1H103KTA	
C32	CU3031	Chip C. .	C1608JB1H471KTA	
C33	CU3031	Chip C. .	C1608JB1H471KTA	
C34	CU3035	Chip C. .	C1608JB1H102KTA	
C35	CU3006	Chip C. .	C1608CH1H060CTA	
C36	CU3064	Chip C. .	C1608CH1H1R5CTA	
C37	CU3064	Chip C. .	C1608CH1H1R5CTA	T
C37	CU3099	Chip C. .	C1608CH1H2R5CTA	T2
C37	CU3064	Chip C. .	C1608CH1H1R5CTA	J
C37	CU3064	Chip C. .	C1608CH1H1R5CTA	C
C37	CU3064	Chip C. .	C1608CH1H1R5CTA	EC10
C38	CU3004	Chip C	C1608CH1H030CTA	T
C38	CU3005	Chip C. .	C1608CH1H040CTA	T2
C38	CU3004	Chip C. .	C1608CH1H030CTA	J
C38	CU3004	Chip C. .	C1608CH1H030CTA	C
C38	CU3004	Chip C. .	C1608CH1H030CTA	EC10

RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
C39	CU3031	Chip C. .	C1608JB1H471KTA	
C40	CU3031	Chip C. .	C1608JB1H471KTA	
C41	CU3006	Chip C. .	C1608CH1H060CTA	T
C41	CU3007	Chip C. .	C1608CH1H050CTA	T2
C41	CU3006	Chip C. .	C1608CH1H060CTA	J
C41	CU3006	Chip C. .	C1608CH1H060CTA	C
C41	CU3006	Chip C. .	C1608CH1H060CTA	EC10
C42	CU3005	Chip C. .	C1608CH1H040CTA	
C43	CU3008	Chip C. .	C1608CH1H070CTA	
C44	CU3109	Chip C. .	C1608CH1H101JTA	T
C44	CU3010	Chip C. .	C1608CH1H090CTA	T2
C44	CU3109	Chip C. .	C1608CH1H101JTA	J
C44	CU3109	Chip C. .	C1608CH1H101JTA	C
C44	CU3109	Chip C. .	C1608CH1H101JTA	EC10
C45	CU3061	Chip C. .	C1608CH1H2R5CTA	
C47	CU3011	Chip C. .	C1608CH1H100CTA	
C49	CU3002	Chip C. .	C1608CH1H010CTA	
C50	CU3003	Chip C. .	C1608CH1H020CTA	
C53	CU3015	Chip C. .	C1608CH1H220JTA	
C54	CU3007	Chip C. .	C1608CH1H050CTA	
C55	CU3009	Chip C. .	C1608CH1H080CTA	
C56	CU3047	Chip C. .	C1608JB1H103KTA	
C57	CU3005	Chip C. .	C1608CH1H040CTA	
C58	CU3010	Chip C. .	C1608CH1H090CTA	T
C58	CU3009	Chip C. .	C1608CH1H080CTA	T2
C58	CU3010	Chip C. .	C1608CH1H090CTA	J
C58	CU3010	Chip C. .	C1608CH1H090CTA	C
C58	CU3010	Chip C. .	C1608CH1H090CTA	EC10
C59	CC3042	Chip C. .	C2012JB1C104KTA	
C60	CU3035	Chip C. .	C1608JB1H102KTA	
C61	CU3035	Chip C. .	C1608CH1H300JTA	
C62	CU3018	Chip C. .	C1608CH1H220JTA	
C63	CU3027	Chip C. .	C1608CH1H221JTA	
C64	CU3027	Chip C. .	C1608CH1H221JTA	
C65	CU3035	Chip C. .	C1608JB1H102KTA	
C66	CU3059	Chip C. .	C1608JF1E104ZTA	
C67	CS0366	Chip Tantal	TMCMA0G106MTR	
C68	CU3011	Chip C. .	C1608CH1H100CTA	
C69	CU3059	Chip C. .	C1608JF1E104ZTA	
C70	CS0366	Chip Tantal	TMCMA0G106MTR	
C71	CS0212	Chip Tantal	TMCMA1A225MTR	
C72	CS0366	Chip Tantal	TMCMA0G106MTR	
C73	CU3035	Chip C. .	C1608JB1H102KTA	
C74	CU3047	Chip C. .	C1608JB1H103KTA	

RFI Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
C75	CU3023	Chip C. .	C1608CH1H101JTA	
C76	CS0213	Chip Tantal	TMCMA1A225MTR	
C77	CU3022	Chip C. .	C1608CH1H820JTA	
C83	CU3023	Chip C. .	C1608CH1H101JTA	
C85	CU3023	Chip C. .	C1608CH1H101JTA	
C86	CU3023	Chip C. .	C1608CH1H101JTA	
C87	CU3035	Chip C. .	C1608JB1H102KTA	
C90	CU3046	Chip C. .	C2012CB1C224KT-A	
C91	CC3036	Chip Tantal	TMCMA0G106MTR	
C92	CU3035	Chip C. .	C1608JB1H102KTA	
C93	CU3051	Chip C. .	C1608JB1E223KTA	
C94	CU3035	Chip C. .	C1608JB1H102KTA	
C95	CU3065	Chip C. .	C1608CH1H300JT-A	
C96	CU3004	Chip C. .	C1608CH1H030CTA	
C97	CU3004	Chip C. .	C1608CH1H030CTA	
C98	CU3035	Chip C. .	C1608JB1H102KTA	
C99	CU3003	Chip C. .	C1608CH1H020CTA	
C100	CU3019	Chip C. .	C1608CH1H470JTA	T
CN1	UE0290	Connector	52168-1422035-T	
CN3	UE0215	Connector	AXN320C130P	
D1	XD0290	Diode	MA111-TX	
D2	XD0272	Diode	1SS356 TW11	
D3	XD0141	Diode	1SV237 TE85R	
D4	XD0272	Diode	1SS356 TW11	
FL1	XF0013	Filter	23.050M20M18B3	
FL2	XC0018	Filter	CFWM450E	
IC1	XA0859	IC	MB4076GP	
IC2	XA0404	IC	T43119F5(EL)	
L2	QC0400	Coil	LQN1A82NJ04	
L3	QC0442	Coil	MLF1608A15NKTA00	
L4	QC0446	Coil	MLF1608A2R2KT	
L5	QC0422	Coil	LL1608-F22NK	
L7	QC0397	Coil	LQN1A8N8J04	
L8	QC0397	Coil	LQN1A8N8J04	
L9	QC0422	Coil	LL1608-F22NK	T
L9	QC0420	Coil	LL1608-F15NK	T2
L9	QC0422	Coil	LL1608-F22NK	J
L9	QC0422	Coil	LL1608-F22NK	C
L9	QC0422	Coil	LL1608-F22NK	EC10
L10	QC0397	Coil	LQN1A8N8J04	
L11	QC0414	Coil	LL1608-F4N7K	
L12	QC0420	Coil	LL1608-F15NK	T
L12	QC0418	Coil	LL1608-F10NK	T2
L12	QC0420	Coil	LL1608-F15NK	J

RFI Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
L12	QC0420	Coil	LL1608-F15NK	C
L12	QC0420	Coil	LL1608-F15NK	EC10
L13	QC0398	Coil	LQN1A10NJ04	
L14	QC0446	Coil	MLF1608A2R2KT	
L15	QC0446	Coil	MLF1608A2R2KT	
L16	QC0519	Coil	LL2012-F8N2K	
L17	QC0400	Coil	LQN1A82NJ04	
L18	QC0519	Coil	LL2012-F8N2K	
L19	QC0519	Coil	LL2012-F8N2K	
L20	QC0519	Coil	LL2012-F8N2K	
L21	QC0398	Coil	LQN1A10NJ04	
L22	QC0403	Coil	LQN1A47NJ04	
Q1	XU0366	Transistor	UN511H-TX	
Q2	XT0142	Transistor	2SC3356T2B R25	
Q3	XT0142	Transistor	2SC3356T1B R25	
Q4	XT0141	Transistor	2SC4226-T1 R24	
Q5	XT0142	Transistor	2SC3356T1B R25	
Q6	XT0142	Transistor	2SC3356T1B R25	
Q7	XT0137	Transistor	2SC5085-O(TE85L)	
Q9	XT0137	Transistor	2SC5085-O(TE85L)	
Q10	XT0137	Transistor	2SC5085-O(TE85L)	
Q11	XT0137	Transistor	2SC5085-O(TE85L)	
Q12	XT0137	Transistor	2SC5085-O(TE85L)	
R1	RK3018	Chip R. .	ERJ3GSYJ220V	
R2	RK3032	Chip R. .	ERJ3GSYJ331V	
R3	RK3011	Chip R. .	ERJ3GSYJ271V	
R4	RK3040	Chip R. .	ERJ3GSYJ4R7V	
R5	RK3014	Chip R. .	ERJ3GSYJ100V	T
R5	RK3001	Chip R. .	ERJ3GSY0R00V	T2
R5	RK3014	Chip R. .	ERJ3GSYJ100V	J
R5	RK3014	Chip R. .	ERJ3GSYJ100V	C
R5	RK3014	Chip R. .	ERJ3GSYJ100V	EC10
R6	RK3042	Chip R. .	ERJ3GSYJ222V	
R7	RK3060	Chip R. .	ERJ3GSYJ103V	
R8	RK3022	Chip R. .	ERJ3GSYJ470V	
R9	RK3010	Chip R. .	ERJ3GSYJ4R7V	
R10	RK3060	Chip R. .	ERJ3GSYJ103V	
R11	RK3022	Chip R. .	ERJ3GSYJ470V	
R12	RK3060	Chip R. .	ERJ3GSYJ103V	
R13	RK3060	Chip R. .	ERJ3GSYJ103V	
R14	RK3042	Chip R. .	ERJ3GSYJ222V	
R15	RK3014	Chip R. .	ERJ3GSYJ100V	
R16	RK3010	Chip R. .	ERJ3GSYJ4R7V	
R17	RK3042	Chip R. .	ERJ3GSYJ222V	

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Ref. No.	Parts No.	Description	Parts Name	Ver.
R18	RK3022	Chip R. .	ERJ3GSYJ470V	
R19	RK3107	Chip R. .	ERJ4GEY0R00V	
R20	RK3022	Chip R. .	ERJ3GSYJ470V	
R21	RK3026	Chip R. .	ERJ3GSYJ101V	
R22	RK3022	Chip R. .	ERJ3GSYJ470V	
R23	RK3026	Chip R. .	ERJ3GSYJ101V	
R24	RK3030	Chip R. .	ERJ3GSYJ221V	
R25	RK3022	Chip R. .	ERJ3GSYJ470V	
R26	RK3062	Chip R. .	ERJ3GSYJ104V	
R27	RK3034	Chip R. .	ERJ3GSYJ471V	
R28	RK3068	Chip R. .	ERJ3GSYJ334V	
R29	RK3038	Chip R. .	ERJ3GSYJ102V	
R30	RK3062	Chip R. .	ERJ3GSYJ104V	
R31	RK3062	Chip R. .	ERJ3GSYJ104V	
R32	RK3032	Chip R. .	ERJ3GSYJ331V	
R33	RK3064	Chip R. .	ERJ3GSYJ154V	
R34	RK3034	Chip R. .	ERJ3GSYJ471V	
R35	RK3038	Chip R. .	ERJ3GSYJ102V	
R37	RK3026	Chip R. .	ERJ3GSYJ101V	
R38	RK3026	Chip R. .	ERJ3GSYJ101V	
R39	RK3054	Chip R. .	ERJ3GSYJ223V	
R40	RK3044	Chip R. .	ERJ3GSYJ332V	
R41	RK3064	Chip R. .	ERJ3GSYJ154V	
R42	RK3060	Chip R. .	ERJ3GSYJ103V	
R43	RK3030	Chip R. .	ERJ3GSYJ221V	
R44	RK3053	Chip R. .	ERJ3GSYJ183V	
R45	RK3026	Chip R. .	ERJ3GSYJ101V	
R46	RK3040	Chip R. .	ERJ3GSYJ152V	
R47	RK3029	Chip R. .	ERJ3GSYJ330V	
R54	RK3048	Chip R. .	ERJ3GSYJ682V	
R56	RK3062	Chip R. .	ERJ3GSYJ104V	
R57	RK3028	Chip R. .	ERJ3GSYJ181V	T
R57	RK3028	Chip R. .	ERJ3GSYJ181V	T2
R57	RK3028	Chip R. .	ERJ3GSYJ181V	J
R59	RK3034	Chip R. .	ERJ3GSYJ471V	
RT2	RH0146	Trim Pot.	MVR22HXBRN473	
RT3	RH0134	Trim Pot.	MVR22HXBRN471	C
RT3	RH0134	Trim Pot.	MVR22HXBRN471	EC10
TC2	CT0012	Trim C.	CTZ10AW	
TC4	CT0012	Trim C.	CTZ10AW	
TC5	CT0012	Trim C.	CTZ10AW	
TP1	UB0213A	Contact Pin	CAL-3714-691	
X1	XQ0093	Crystal	38CHT 22.6MHZ	T
X1	XQ0080	Crystal	38CHT 23.5MHZ	T2

Ref. No.	Parts No.	Description	Parts Name	Ver.
X1	XQC09	Crystal	38CHT 23.5MHZ	J
X1	XQ0089	Crystal	38CHT 22.5MHZ	C
X1	XQ0080	Crystal	38CHT 23.5MHZ	EC10
X2	XK0004	Discriminator	CDBM450C24	
	TZ0049	Silicon Damper		
	SS0057	Chassis		
	UP0304C	PCB		

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Ref. No.	Parts No.	Description	Parts Name	Ver.
C301	CE0304	Electrolytic C	4CV 2200SUmfy	
C301	CS0062	Chip Tantal	[illegible]	
C302	CS0063	Chip Tantal	TMCSA1V104MTR	
C303	CS0049	Chip Tantal	TMCSA1C105MTR	
C304	CU3023	Chip C.	C1608CH1H101JTA	
C305	CU3047	Chip C.	C1608JB1H103KTA	
C306	CS0066	Chip Tantal	TMCMA0J106MTR	
C307	CU3047	Chip C.	C1608JB1H103KTA	
C308	CS0049	Chip Tantal	TMCSA1C105MTR	
C309	CU3035	Chip C.	C1608JB1H102KTA	
C310	CU3021	Chip C.	C1608CH1H680JTA	
C311	CU3051	Chip C.	C1608JB1E223KTA	
C312	CU3031	Chip C.	C1608JB1H471KTA	
C313	CS0063	Chip Tantal	TMCSA1V104MTR	
C314	CS0049	Chip Tantal	TMCSA1C105MTR	
C315	CS0049	Chip Tantal	TMCSA1C105MTR	
C316	CU3035	Chip C.	C1608JB1H102KTA	
C317	CU3039	Chip C.	C1608JB1H222KTA	
C318	CU3051	Chip C.	C1608JB1E223KTA	
C319	CU3051	Chip C.	C1608JB1E223KTA	
C320	CS0049	Chip Tantal	TMCSA1C105MTR	
C321	CE0308	Electrolytic C	6.3CV 100U5	
C322	CU3047	Chip C.	C1608JB1H103KTA	
C323	CU3059	Chip C.	C1608JF1E104ZTA	
C324	CU3059	Chip C.	C1608JF1E104ZTA	
C325	CS0097	Chip Tantal	TMCMA0J335MTR	
C326	CU3047	Chip C.	C1608JB1H103KTA	
C327	CU3051	Chip C.	C1608JB1E223KTA	
C328	CU3059	Chip C.	1608JF1E104ZTA	
C329	CS0065	Chip Tantal	TMCMC0J476MTR	
C330	CU3047	Chip C.	C1608JB1H103KTA	
C331	CU3051	Chip C. C	1608JB1E223KTA	
C333	CU3059	Chip C.	C1608JF1E104ZTA	
C334	CU3051	Chip C.	C1608JB1E223KTA	
C335	CU3059	Chip C.	C1608JF1E104ZTA	
C336	CU3031	Chip C.	C1608JB1H471KTA	

CPU Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
C337	CU3047	Chip C.	C1608JB1H103KTA	
C338	CU3035	Chip C.	C1608JB1H102KTA	
C339	CS0211	Chip Tantal	TMCMC0J336MTR	
C340	CU3035	Chip C.	C1608JB1H102KTA	
C341	CU3047	Chip C.	C1608JB1H103KTA	
C342	CU3061	Chip C.	C1608JB1E224KTA	
C343	CU3017	Chip C.	C1608CH1H330JTA	
C344	CU3017	Chip C.	C1608CH1H330JTA	
C345	CS0207	Chip Tantal	TMCMA0J336MTR	
C346	CU3035	Chip C.	C1608JB1H102KTA	
C347	CS0063	Chip Tantal	TMCSA1V104MTR	
C348	CU3047	Chip C.	C1608JB1H103KTA	
C349	CU3047	Chip C.	C1608JB1H103KTA	
C350	CS0213	Chip Tantal	TMCMA1A225MTR	
C351	CS0049	Chip Tantal	TMCSA1C105MTR	
C352	CU3047	Chip C.	C1608JB1H103KTA	
C353	CU3027	Chip C.	C1608CH1H221JTA	
C354	CU3027	Chip C.	C1608CH1H221JTA	
C355	CU3023	Chip C.	C1608CH1H101JTA	
C356	CU3023	Chip C.	C1608CH1H101JTA	
C357	CU3023	Chip C.	C1608CH1H101JTA	
C358	CU3044	Chip C.	C1608JB1H562KTA	
C359	CS0061	Chip Tantal	TMCSA1V226MTR	
C363	CU3035	Chip C.	C1608JB1H102KTA	
C364	CU3035	Chip C.	C1608JB1H102KTA	
CN302	UE0214		AXN420530P	
D301	XD0230	Diode	MA111-TX	
D302	XD0225	Diode	U1GWJ44 TE12R	
D303	XD0225	Diode	U1GWJ44 TE12R	
D304	XL0031	Diode	SML-110MTT86	
D305	XL0035	Diode	SML-310UTT86	
D306	XD0225	Diode	U1GWJ44 TE12R	
EL301	EL0035A	LCD	T464606C	
IC201	XA0209	IC	NJM2100M T1	
IC202	XA0210	IC	NJM2070M T2	
IC203	XA0470	IC	M38223M4-407HP T	
IC223	XA0470	IC	M38223M4-407HP T2	
IC303	XA0385	IC	LC75821W-TLM J	
IC303	XA0470	IC	M38223M4-407HP C	
IC303	XA0470	IC	M38223M4-407HP EC10	
IC304	XA0230	IC	AN77L03M E1	
IC305	XA0364	IC	AT24C02N-10SI-2.7	
IC306	XA0209	IC	RH5V1.25AA-T1	
JK301	UJ0022	Jack	HSJ1102-01-540	

CPU Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
JK302	UJ0016	Jack	HSJ1093-01-050	
JK303	UJ0026	Jack	HEC3600-01010	
L301	QC0279	Coil	NL252018T-1R5J	
MC301	EV0012	Mic	EM-123T	
Q301	XT0094	Transistor	2SA1576A-T106R	
Q302	XU0166	Transistor	UN611H-TX	
Q303	XT0105	Transistor	2SC4213A-TE85L	
Q304	XU0167	Transistor	UN2122-TX	
Q306	XU0052	Transistor	UN5214 TX	
Q308	XT0096	Transistor	2SC4081 T106R	
Q307	XT0096	Transistor	2SC4081 T106R	
Q308	XT0105	Transistor	2SC4213A-TE85L	
Q309	XU0052	Transistor	UN5214 TX	
Q310	XU0046	Transistor	XN111M TX	
Q311	XU0046	Transistor	XN111M TX	
Q312	XT0096	Transistor	2SC4081 T106R	
Q313	XU0166	Transistor	UN611H-TX	
R301	RK3056	Chip R.	ERJ3GSYJ472V	
R302	RK4051	Chip R.	ERJ14YJ101V	
R305	RK1058	Chip R.	ERJ3GSYJ102V	
R304	RK0070	Chip R.	ERJ3GSYJ474V	
R305	RK3042	Chip R.	ERJ3GSYJ222V	
R306	RK3070	Chip R.	ERJ3GSYJ474V	
R307	RK3058	Chip R.	ERJ3GSYJ473V	
308 R	K3058	Chip R.	ERJ3GSYJ473V	
R309	RK3046	Chip R.	ERJ3GSYJ472V	
R310	RK3058	Chip R.	ERJ3GSYJ473V	
R311	RK3050	Chip R.	ERJ3GSYJ103V	
R312	RK3059	Chip R.	ERJ3GSYJ563V	
R313	RK3054	Chip R.	ERJ3GSYJ223V	
R315	RK3058	Chip R.	ERJ3GSYJ473V	
R316	RK3070	Chip R.	ERJ3GSYJ474V	
R317	RK3058	Chip R.	ERJ3GSYJ473V	
R318	RK3058	Chip R.	ERJ3GSYJ473V	
R319	RK3049	Chip R.	ERJ3GSYJ222V	
R320	RK3058	Chip R.	ERJ3GSYJ473V	
R321	RK3066	Chip R.	ERJ3GSYJ224V	
R322	RK3062	Chip R.	ERJ3GSYJ104V	
R323	RK3062	Chip R.	ERJ3GSYJ104V	
R324	RK3050	Chip R.	ERJ3GSYJ103V	
R325	RK3001	Chip R.	ERJ3GSYJ000V	J
R326	RK3038	Chip R.	ERJ3GSYJ102V	
R327	RK3058	Chip R.	ERJ3GSYJ473V	
R328	K3042	Chip R.	ERJ3GSYJ222V	

Ref. No	Parts No.	Description	Parts Name	Ver.
R329	RK3056	Chip R.	ERJ3GSYJ333V	
R330	RK3001	Chip R.	ERJ3GSY0R00V	T
R330	RK3001	Chip R.	ERJ3GSY0R00V	J
R331	RK3056	Chip R.	ERJ3GSYJ333V	
R332	RK3053	Chip R.	ERJ3GSYJ124V	
R334	RK3060	Chip R.	ERJ3GSYJ102V	
R335	RK3050	Chip R.	ERJ3GSYJ101V	
R336	RK3037	Chip R.	ERJ3GSYJ821V	
R337	RK3006	Chip R.	ERJ3GSYJ224V	
R338	RK3014	Chip R.	ERJ3GSYJ100V	
R339	RK3026	Chip R.	ERJ3GSYJ101V	
R340	RK3042	Chip R.	ERJ3GSYJ222V	
R341	RK3070	Chip R.	ERJ3GSYJ474V	
R342	RK3044	Chip R.	ERJ3GSYJ332V	
R343	RK3073	Chip R.	ERJ3GSYJ824V	
R344	RK3059	Chip R.	ERJ3GSYJ103V	
R345	RK3056	Chip R.	ERJ3GSYJ333V	
R346	RK3060	Chip R.	ERJ3GSYJ102V	
R347	RK3046	Chip R.	ERJ3GSYJ472V	
R348	RK3063	Chip R.	ERJ3GSYJ163V	
R349	RK3038	Chip R.	ERJ3GSYJ102V	
R350	RK3052	Chip R.	ERJ3GSYJ331V	
R351	RK3042	Chip R.	ERJ3GSYJ222V	
R353	RK3060	Chip R.	ERJ3GSYJ103V	
R354	RK3062	Chip R.	ERJ3GSYJ104V	
R355	RK3068	Chip R.	ERJ3GSYJ473V	
R356	RK3074	Chip R.	ERJ3GSYJ105V	
R357	RK3054	Chip R.	ERJ3GSYJ223V	
R358	RK3056	Chip R.	ERJ3GSYJ473V	
R359	RK3068	Chip R.	ERJ3GSYJ473V	
R360	RK3028	Chip R.	ERJ3GSYJ101V	
R361	RK3046	Chip R.	ERJ3GSYJ472V	
R362	RK3028	Chip R.	ERJ3GSYJ151V	
R363	RK3068	Chip R.	ERJ3GSYJ473V	
R364	RK3068	Chip R.	ERJ3GSYJ473V	
R365	RK3030	Chip R.	ERJ3GSYJ221V	
R366	RK3068	Chip R.	ERJ3GSYJ473V	
R367	RK3035	Chip R.	ERJ3GSYJ561V	
R368	RK3059	Chip R.	ERJ3GSYJ103V	
R369	RK3050	Chip R.	ERJ3GSYJ103V	
R370	RK3062	Chip R.	ERJ3GSYJ104V	
R371	RK3062	Chip R.	ERJ3GSYJ104V	
R373	RK3042	Chip R.	ERJ3GSYJ222V	
R374	RK3001	Chip R.	ERJ3GSY0R00V	T

Ref. No.	Parts No.	Description	Parts Name	Ver.
R377	RK3056	Chip R.	ERJ3GSYJ106V	
R378	RK3050	Chip R.	ERJ3GSYJ103V	
R379	RK3060	Chip R.	ERJ3GSYJ103V	
R380	RK3001	Chip R.	ERJ3GSY0R00V	EC10
R380	RK3001	Chip R.	ERJ3GSY0R00V	C
R382	RK3001	Chip R.	ERJ3GSY0R00V	T
R382	RK3001	Chip R.	ERJ3GSY0R0AV	T2
R382	RK3001	Chip R.	ERJ3GSY0R00V	J
R382	RK3001	Chip R.	ERJ3GSY0R00V	C
R382	RK3038	Chip R.	ERJ3GSYJ102V	EC10
R383	RK4059	Chip R.	ERJ14YJ220V	T
R383	RK4059	Chip R.	ERJ14YJ220V	T2
R383	RK4059	Chip R.	ERJ14YJ220V	C
R383	RK4069	Chip R.	ERJ14YJ220V	EC10
RA301	RA0021	Chip R.	EXBV4V103JV	
RA302	RA0011	Chip R.	EXBV8V103JV	
RA303	RA0012	Chip R.	EXBV4V472JV	
RA304	RA0010	Chip R.	EXBV8V472JV	
RT301	RH0146	Trim Pot.	MVR22HXBR473	
RT302	RH0154	Trim Pot.	MVR22HXBR103	
SW301	UU0018	Switch	SOP-112HST	
SW302	UU0018	Switch	SOP-112HST	
SW303	UU0018	Switch	SOP-112HST	
VR301	RV0025	V.R	TP60X0N	
X301	XQ0072	Crystal	38C 4.0000MHZ	
W301	MKCLH2AA	Wire	#30 Orange 02-025-02	C
W301	MKCLH2AA	Wire	#30 Orange 02-025-02	EC10
	AR0005		2x1 5PaNi	
	DC0020		LCD Light	
	FC0064		Mic Holder	
	FG0170A		Rubber Connector	
	FG0229		Mic Cushion	
	FX0002		Mic Spacer	
	ST0041		LCD Holder	
	TL0013		Reflection Sheet	
	TN0001		Mic Shield	
	TZ0072		Insulation Tape	
	YZ0145		Adhesive Tape	
VCO Unit				
C101	CU3018	Chip C.	C1608CH1H330JTA	
C102	CU3059	Chip C.	C1608JF1E104ZTA	
C103	CS0063	Chip Tantal	TMCSA1V104MTR	
C104	CU3035	Chip C.	C1608JB1H102KTA	
C106	CU3035	Chip C.	C1608JB1H102KTA	

Ref. No.	Parts No.	Description	Parts Name	Ver.
C107	CU3096	Chip C.	C1608JB1H102KTA	
C108	CS0305	Chip Tantal	TMCMA0G106MTR	
C109	CU3099	Chip C.	C1608CH1H2R5CTA	
C110	CU3098	Chip C.	C1608CH1H070CTA	
C111	CU3010	Chip C.	C1608CH1H090CTA	
C112	CU3035	Chip C.	C1608JB1H102KTA	
C113	CU3091	Chip C.	C1608CH1H2R5CTA	
C114	CU3002	Chip C.	C1608CH1H080CTA	
C115	CU3004	Chip C.	C1608CH1H030CTA	
C116	CU3004	Chip C.	C1608CH1H030CTA	
C117	CU3035	Chip C.	C1608JB1H102KTA	
C118	CU3035	Chip C.	C1608JB1H102KTA	
CN101	UZ0216	Connector	9200B-1-06Z054T	
D101	XD0272	Diode	1SS356 TW11	
D102	XD0250	Diode	1SV257(TPH3)	
D103	XD0236	Diode	1SV238 TPH3	
D104	XD0250	Diode	1SV257(TPH3)	
L101	QC0422	Coil	LL1608-F22NK	
L102	QKA25A	Coil	MR1.5 2.5T 0.4	
Q101	XT0137	Transistor	2SC5065-O(TE85L)	
Q102	XT0137	Transistor	2SC5065-O(TE85L)	
Q103	XA0062	Transistor	UN5214 TX	
R101	RK3062	Chip R.	ERJ3GSYJ104V	
R103	RK3042	Chip R.	ERJ3GSYJ222V	
R104	RK3022	Chip R.	ERJ3GSYJ470V	
R105	RK3042	Chip R.	ERJ3GSYJ222V	
R106	RK3022	Chip R.	ERJ3GSYJ470V T	
R106	RK3014	Chip R.	ERJ3GSYJ100V T2	
R106	RK3022	Chip R.	ERJ3GSYJ470V J	
R106	RK3022	Chip R.	ERJ3GSYJ470V C	
R106	RK3022	Chip R.	ERJ3GSYJ470V	EC10
R107	RK3050	Chip R.	ERJ3GSYJ103V	
R109	RK3062	Chip R.	ERJ3GSYJ104V	
R109	RK3062	Chip R.	ERJ3GSYJ104V	
R110	RK3050	Chip R.	ERJ3GSYJ103V	
R111	RK3056	Chip R.	ERJ3GSYJ333V	
R112	RK3014	Chip R.	ERJ3GSYJ471V	
R113	RK3038	Chip R.	ERJ3GSYJ102V	
R114	RK3038	Chip R.	ERJ3GSYJ102V	
R115	RK3001	Chip R.	ERJ3GSY0R00V	
	TS0117		VCO Case	
Mechanical Parts				
	AF0005	Screw	2×3.5 FeNi	
	AN0007	Nut	M4 0.7 FeNi	

Ref. No.	Parts No.	Description	Parts Name	Ver.
	AN0012	Nut	Dial Nut	
	AX0004	Screw	2×8 FeBC	
	RA0050A		Antenna	
	ES0117	Speaker	036M0613	
	FC0073		Battery Cushion	
	FC0106		SP Cushion	
	FC0107		Mic Sheet	
	FC0108		Battery Rubber	
	FC0132		Battery Rubber	
	FC0151		On Air Light	
	FC0164		Scan Key	
	FC0220		PTT Rubber	
	FC0221		CD Key	
	FC0223		Lamp Key	
	FC0224		VM Key	
	FM0066		Pin	
	FP0104		Lock Lever	
	FT0121		SP Spacer	
	KB2063		Rear Case	
	KF0232		Battery Cover	
	KZ0057T		Front Case T	
	KZ0057T		Front Case T2	
	KZ0057Y		Front Case J	
	KZ0058Y		Front Case EC10	
	KZ0059Y		Front Case C	
	KZ0056Y		LCD Panel J	
	KZ0056Y		LCD Panel T	
	KZ0056Y		LCD Panel T2	
	KZ0056Y		LCD Panel C	
	KZ0056Y		LCD Panel EC10	
	MBCL024A	Wire	#30 Black 2-020-2	
	MRCL024A	Wire	#30 Red 2-020-2	
	NK0053		Volume Knob	
	PR0217		Caution Label J	
	PR0338		Caution Label T	
	PR0339		Caution Label T2	
	PR0339		Caution Label C	
	PR0338		Caution Label EC10	
	SD0027A		Battery Terminal B	
	SD0028		Battery Terminal C	
	SD0041		Pulse Spring	
	SD0042		Minus Spring	
	SD0043B		Charge Spring	
	SD0044		Charge Terminal	

Ref. No.	Parts No.	Description	Parts Name	Ver.
	ST0075Z		SP Holder	
	TW0007B		Jack Cap	
	TW0008		Cover Rubber	
	TW0009		Battery Rubber	
	TW0068		Insulator	
			Packing	
	HK0339B		Item Carton	T
	HK0339B		Item Carton	T2
	HK033		Item Carton	J
	HK0339B		Item Carton	C
	HK0413		Item Carton	EC10
	PH0009		Registration Card	T
	HB0008A		Fixture	
	PH0237		PCC Part15 Seal	T
	HW0133B		Item Carton 10sets	
	PS0270		Instruction Manual	T
	PS0210		Instruction Manual	T2
	PS0253A		Instruction Manual	C
	PS0270		Instruction Manual	C
	PS0246		Instruction Manual	EC10
	PH0045		T2 Sheet	T2
	DS0372B		Spec Sheet	T
	DS0372B		Spec Sheet	T2
	DS0355		Spec Sheet	J
	DS0388		Spec Sheet	C
	DS0373A		Spec Sheet	EC10
	PY0004A		Lot No Seal For Box	
	PB0301		CE Mark Label	C
	PB0309		CE Mark Label	EC10
	HP0006		Protection Bag 6x90x150	
	FP0105		Belt Clip	
	AE0008		Belt Clip Screw	
	AZ0029		PE Washer	
	BB0007		Hand Strap	

Ref. No.	Parts No.	Description	Parts Name	Ver.

Ref. No.	Parts No.	Description	Parts Name	Ver.

Ref. No.	Parts No.	Description	Parts Name	Ver.

ADJUSTMENT

For DJ-S41T/T2/(J)/(C) & EC10

1) Required Test Equipment

1. Digital Multimeter

2. Regulated Power Supply

Supply voltage: 5.5VDC
Current: 1A or more

3. Oscilloscope

Measurable frequency: Audio Frequency

4. Spectrum Analyzer

Measuring range: Up to 2GHz or more

5. Power Meter

Measurable frequency: Up to 500MHz
Impedance: 50Ω
Power: 1W or more

6. Speaker

Impedance: 8Ω

7. SSG

Output frequency: Up to 1GHz
Output level: -20dB/0.1μV to120dB/1V
Modulation: FM

8. Transceiver Tester

Up to 500MHz

a. Frequency Counter

b. Power Meter

Impedance: 50Ω
Measuring range: 1W or more

c. Audio Voltmeter

Measurable frequency: 50Hz ~ 10kHz
Sensitivity: 1mV ~ 10V

d. Distortion Meter

Measurable frequency: 1kHz
Input level: Up to 40dB
Distortion level: 1% ~ 100%

e. Audio Generator

Output frequency: 1kHz ~ 10kHz
Output impedance: 600Ω

f. Linear Detector

Note:

1. 5.5V of power voltage is supplied from DC jack.
2. The transmitter system should be adjusted or inspected in high power.

2) Adjustment For DJ-S41T/T2/(J)/(C) & EC10

Item	Condition	Measurement			Adjustment			Specificartions
		Equipment	Unit	Terminal	Unit	Parts	Method	
PLL VCO	f=439.95 RX(J) f=434.05 RX (C)(EC10) f=449.95 RX(T)	Digital Multimeter	RF	PD	VCO		See *1.	1.6~1.8V(J) 1.2~1.4V(C) 0.7~0.9V(T)
	f=439.95 TX(J) f=434.05 TX (C)(EC10) f=449.95 TX(T)					-	Check	2.3V or below (J,T) 1.8 or below(C)
Reference Frequency	f=435.05 TX(J)(T) f=434.05 TX (C)(EC10)	Freq. Counter			RF	TC5	f=435.05 (J)(T) f=434.05(C)(EC10)	±100Hz
TX Power	f=434.05 TX (C)(EC10)	Power Meter	RF	ANT	RF	RT3	10mW±0.5mW	10mW±0.5mW
TX Power Hi	f=435.05 TX(J)(T) DC=5.5V See *2.				-	-	Check	340mW or more
TX Power Low							Check	150mW or below
Diviation	f=435.05 TX(J)(T) f=434.05 TX (C)(EC10) AG:1kHz 50mV (-30dBm)	Linear Det. Oscilloscope Power Meter AG	RF	ANT	CPU	RT301	4.5±0.1kHz	4.5±0.1kHz
Tone	f=435.05 TX(J)(T) f=434.05 TX (C)(EC10)						Check	0.8 ~ 1.0kHz
Sensitivity	f=435.05 RX(J)(T) f=434.05 RX (C)(EC10)	SSG Distortion Meter Oscilloscope Level Meter	RF	ANT	RF	TC2,4	12dB SINAD max.	-8dBμ (EMF) or below
Squelch	f=435.05 TX(J)(T) f=434.05 TX (C)(EC10) Output: -12dBμ Mod: ON				RF	RT2	SQ Open	-15dBμ>Close -9dBμ<Open
S meter	f=435.05 RX(J)(T) f=434.05 RX (C)(EC10) Out put: +12dBμ Mod: ON				CPU	RT302	All digits are lit up.	

*1:Extend the coil L102 so that the P.D. voltage becomes { 1.7±0.1V(J). / 1.3±0.1(C)(EC10). / 0.8±0.1V(T).

*2:Switching to Low power

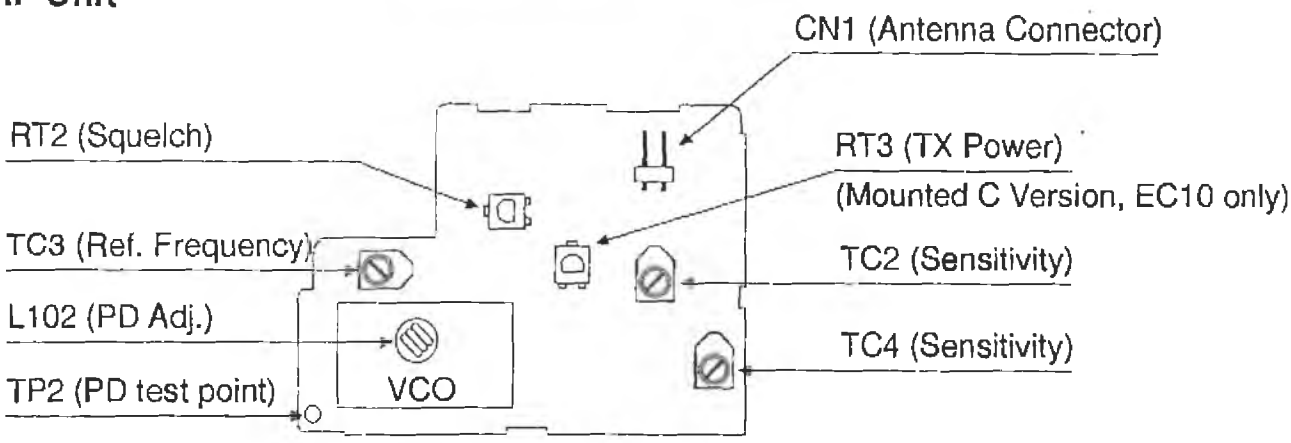
(J) ·····Press RPT key while transmitting.

(T) ·····Press SCAN key while transmitting.

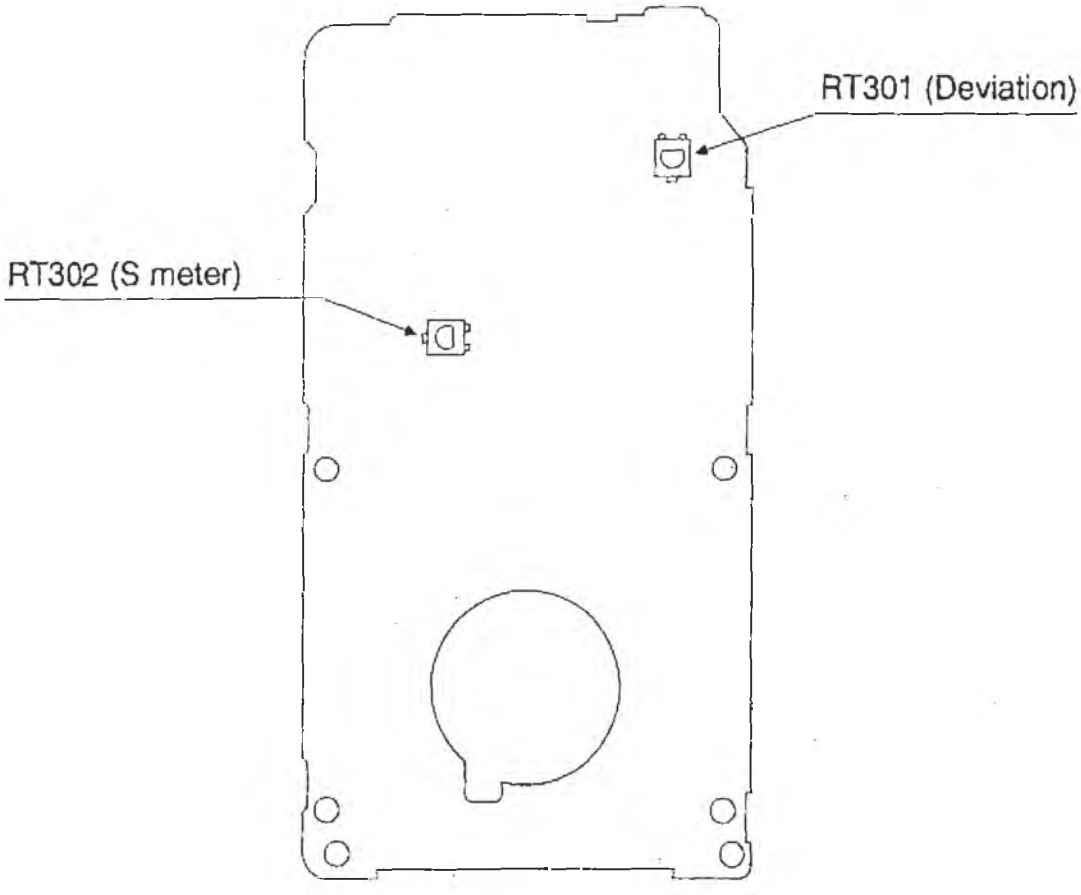
(C)(EC10) ·····No TX power selector

3) Adjustment Points **For DJ-S41T/T2/(J)/(C) & EC10**

RF Unit



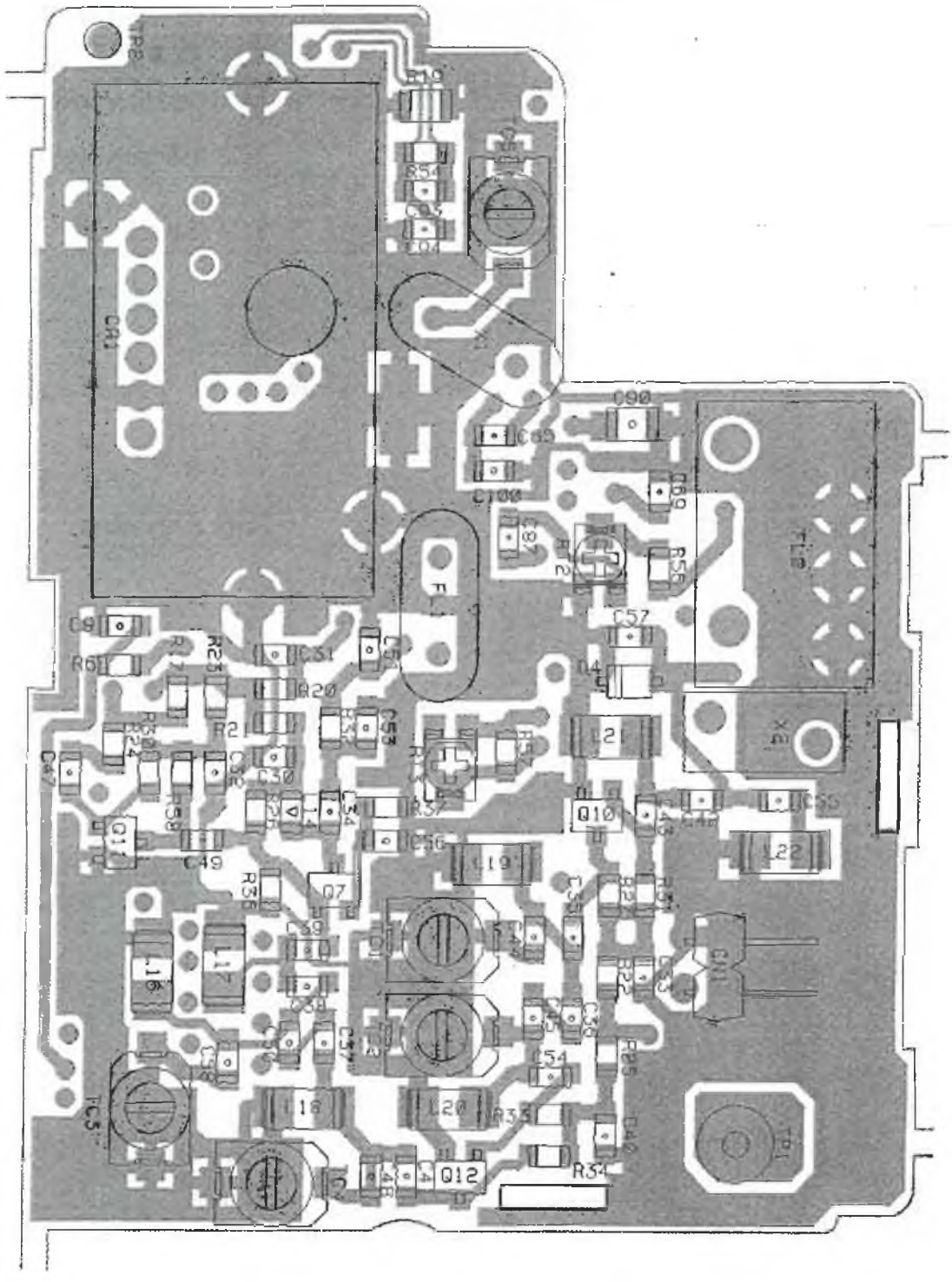
CPU Unit



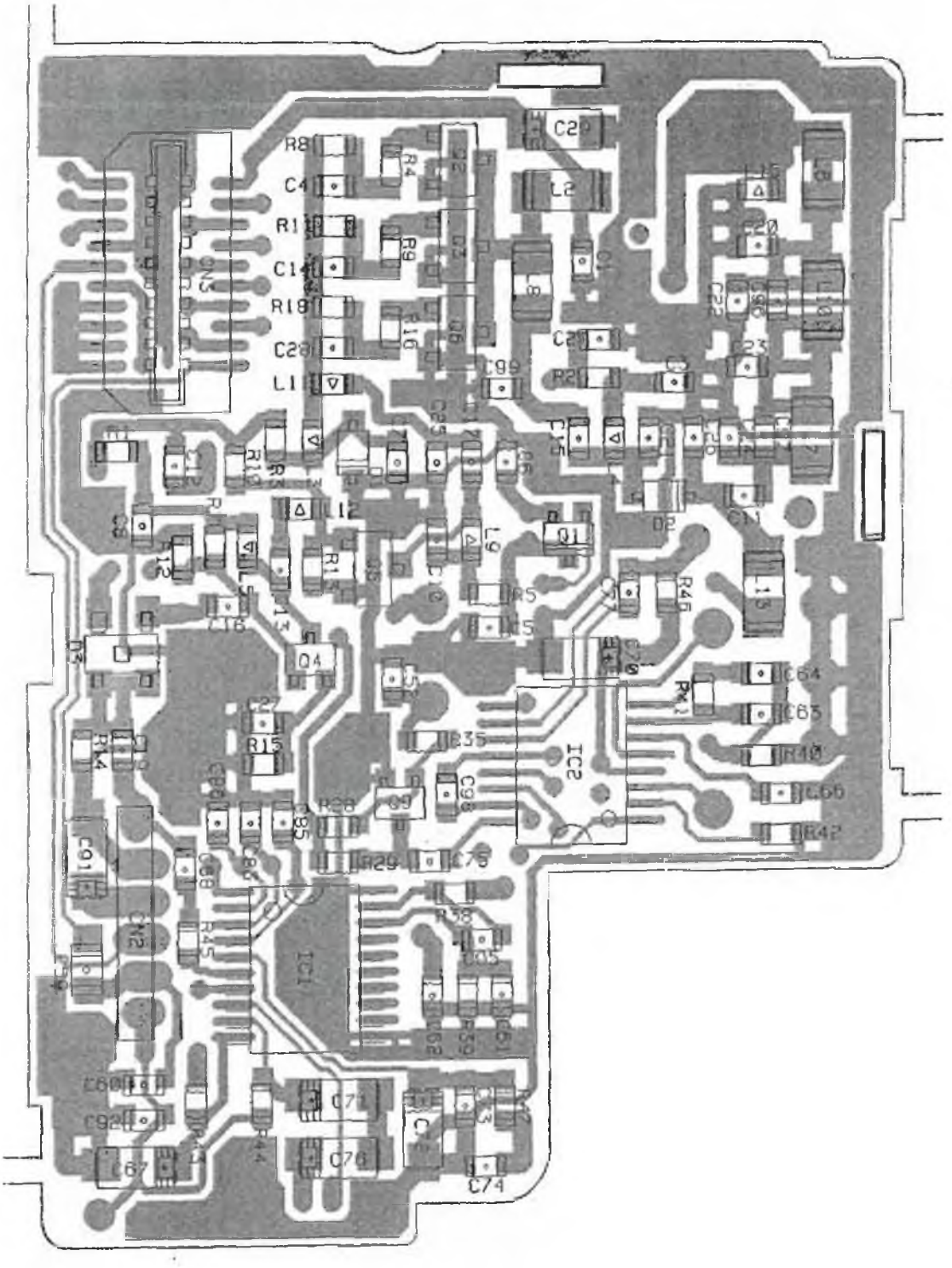
PC BOARD VIEW

1) RF Unit

Component side **For DJ-S41T/T2/(J)/(C) & EC10**

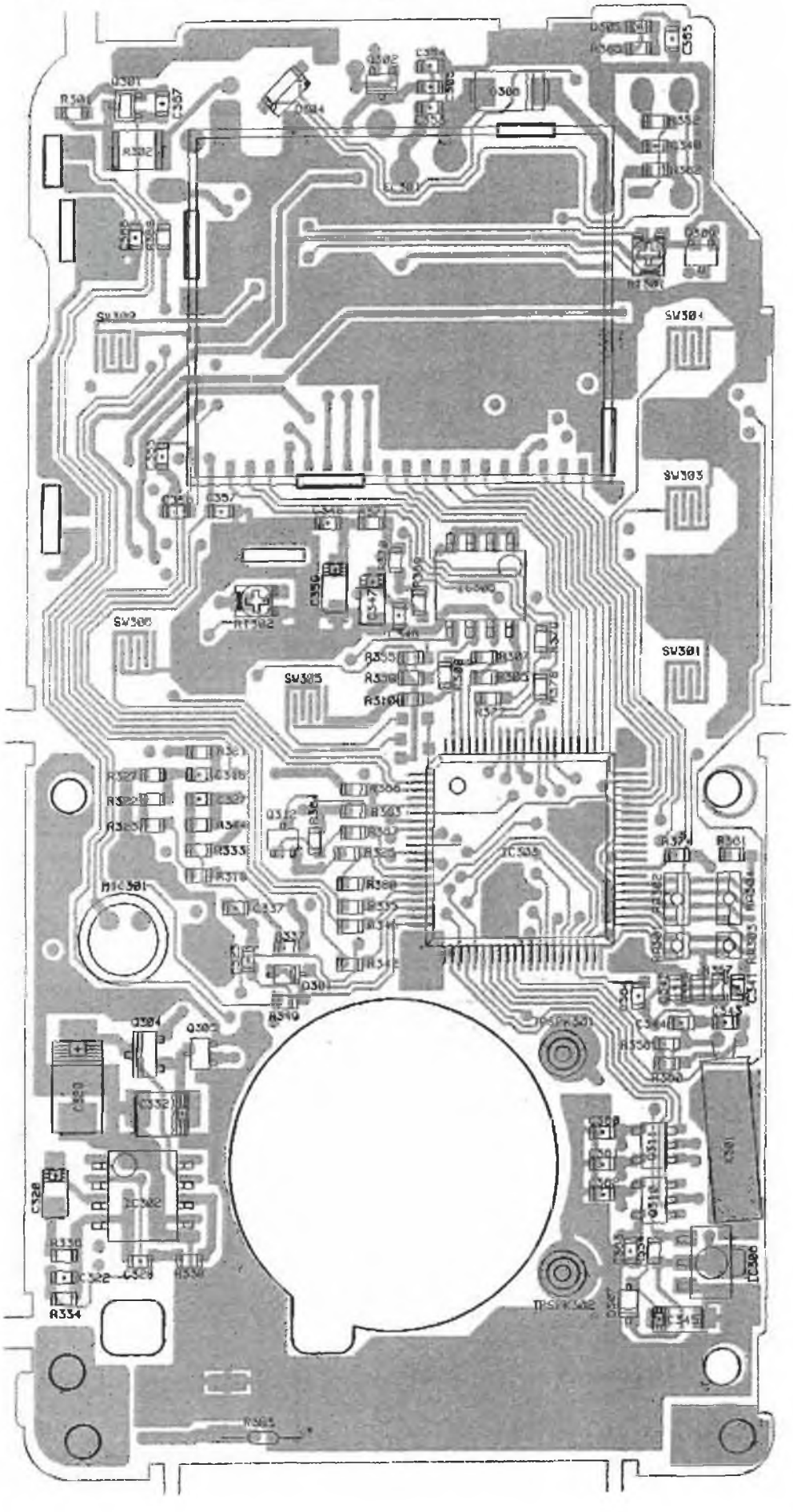


Solder side **For DJ-S41T/T2/(J)/(C) & EC10**



2) CPU Unit early version

Component side **For DJ-S41T/T2/(J)/(C)** (Not for EC10)

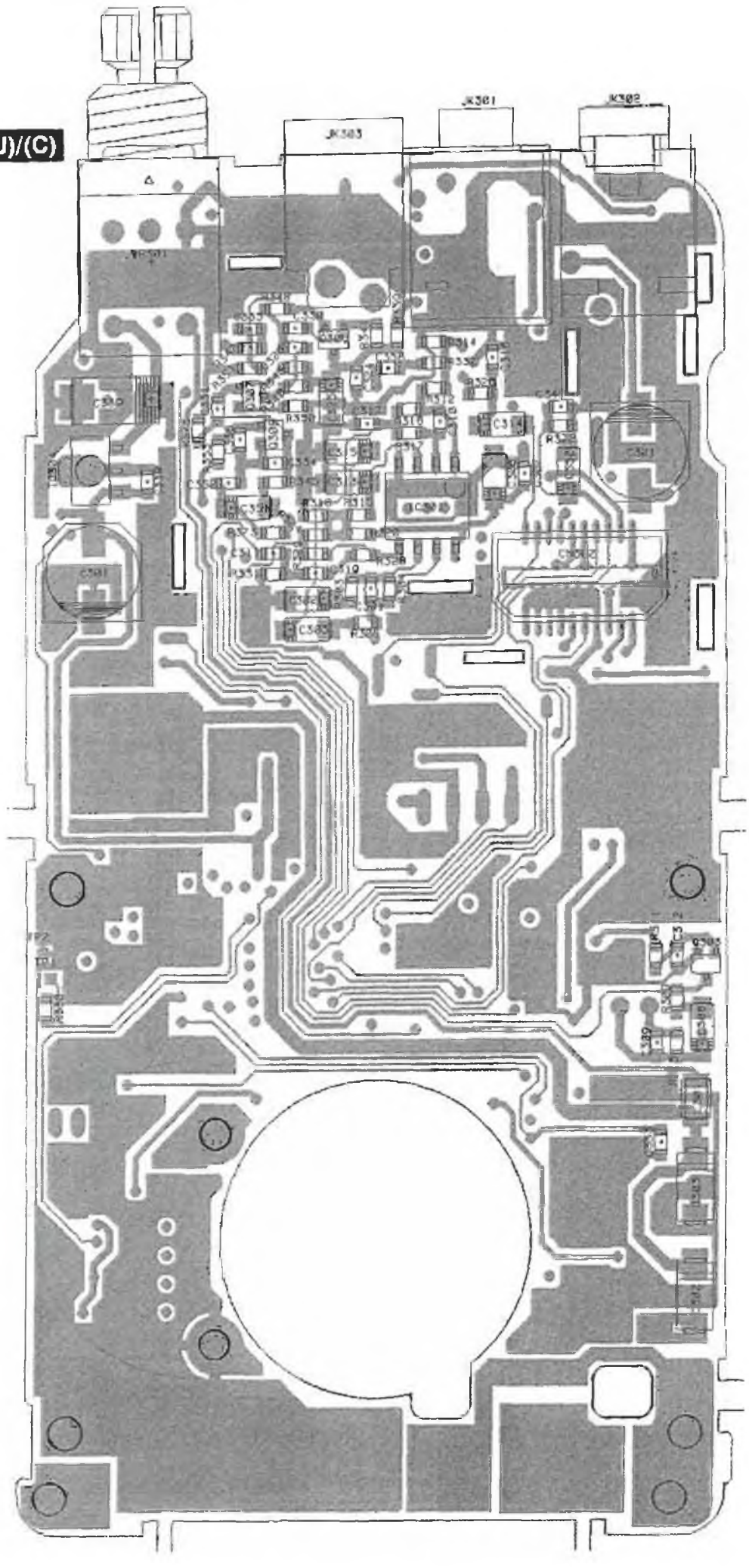


*Installing R383 will make C41 rechargable thru the DC jack (max. 6V DC).

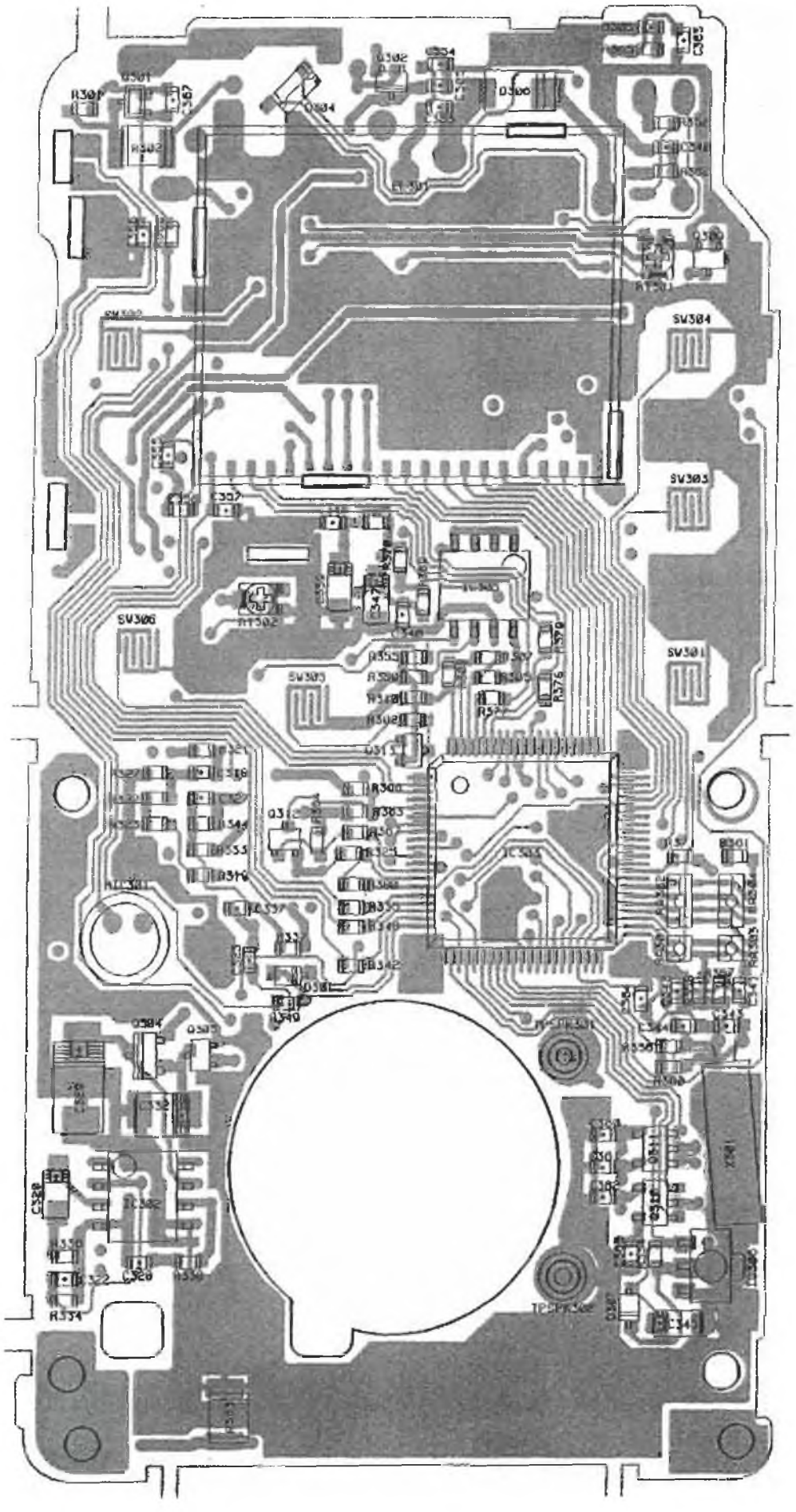
Solder side

For DJ-S41T/T2/(J)/(C)

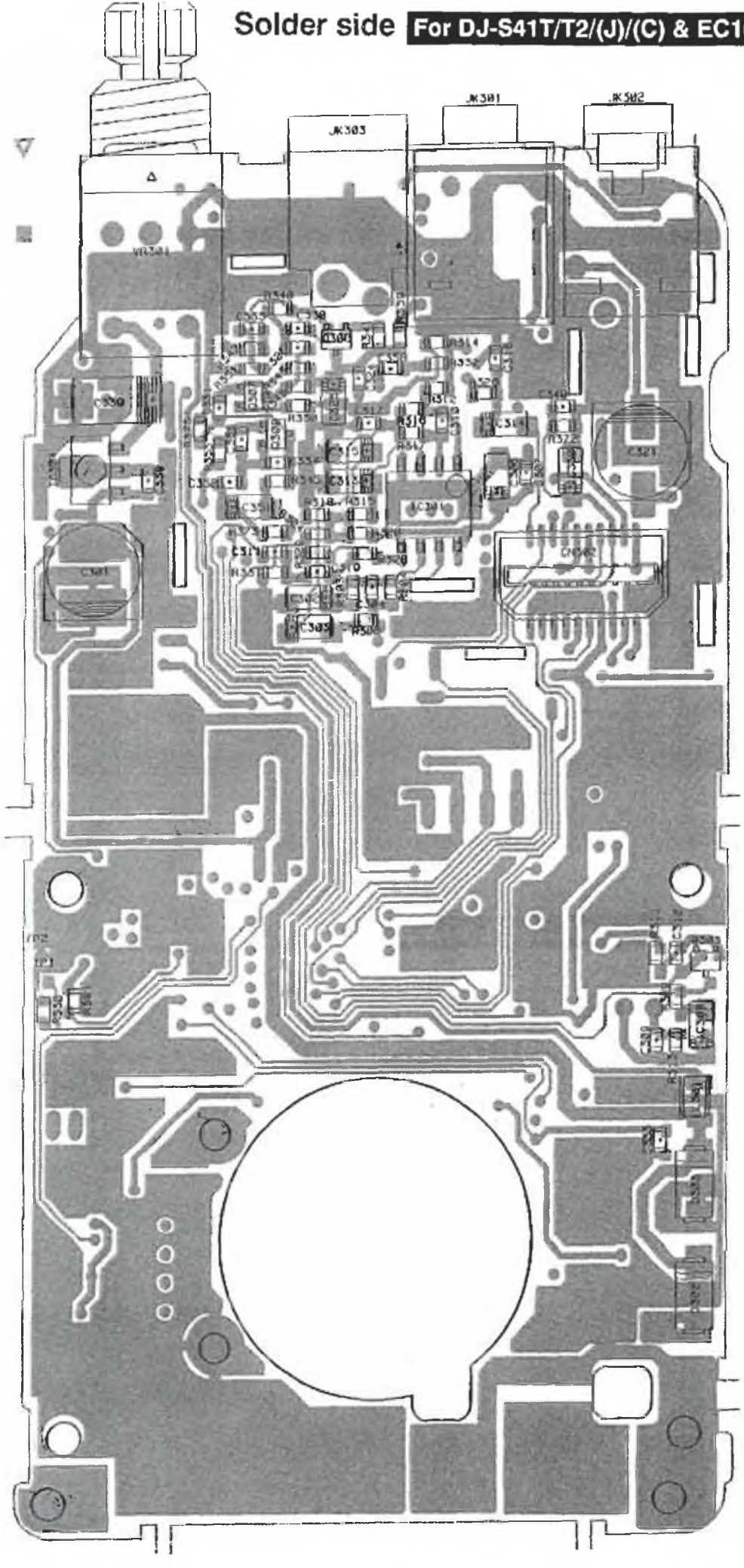
(Not for EC10)



3) CPU Unit later version Component side **For DJ-S41T/T2/(J)/(C) & EC10**

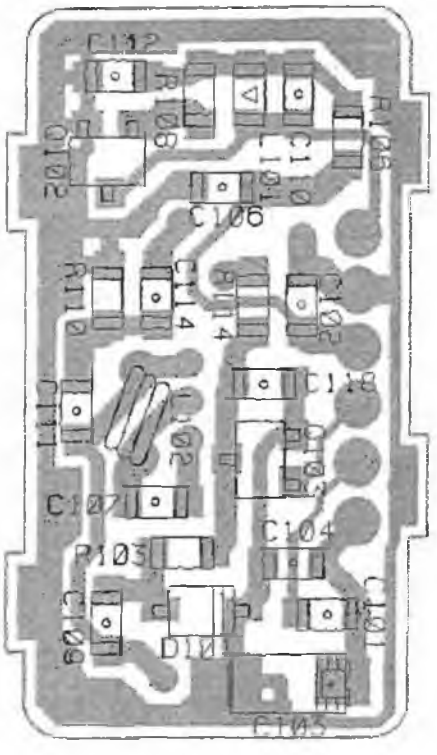


Solder side For DJ-S41T/T2/(J)/(C) & EC10

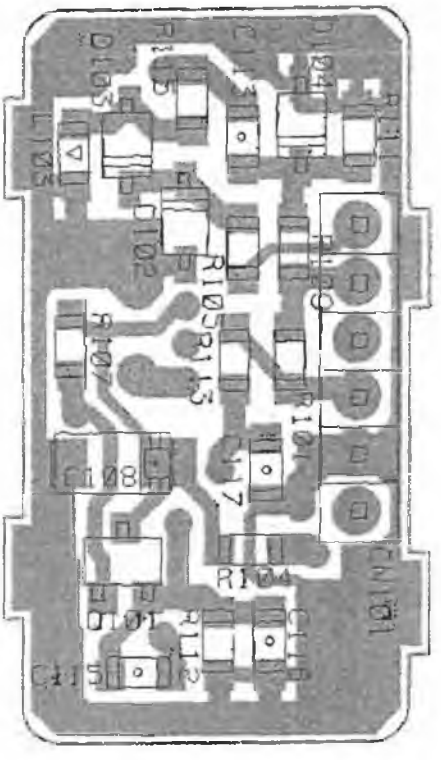


4) VCO Unit For DJ-S41T/T2/(J)/(C) & EC10

Component side

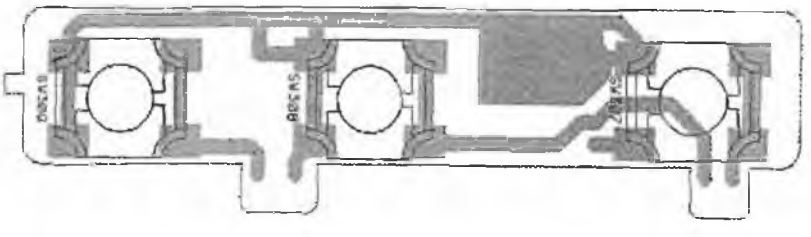


Solder side



5) SW Unit For DJ-S41T/T2/(J)/(C) & EC10

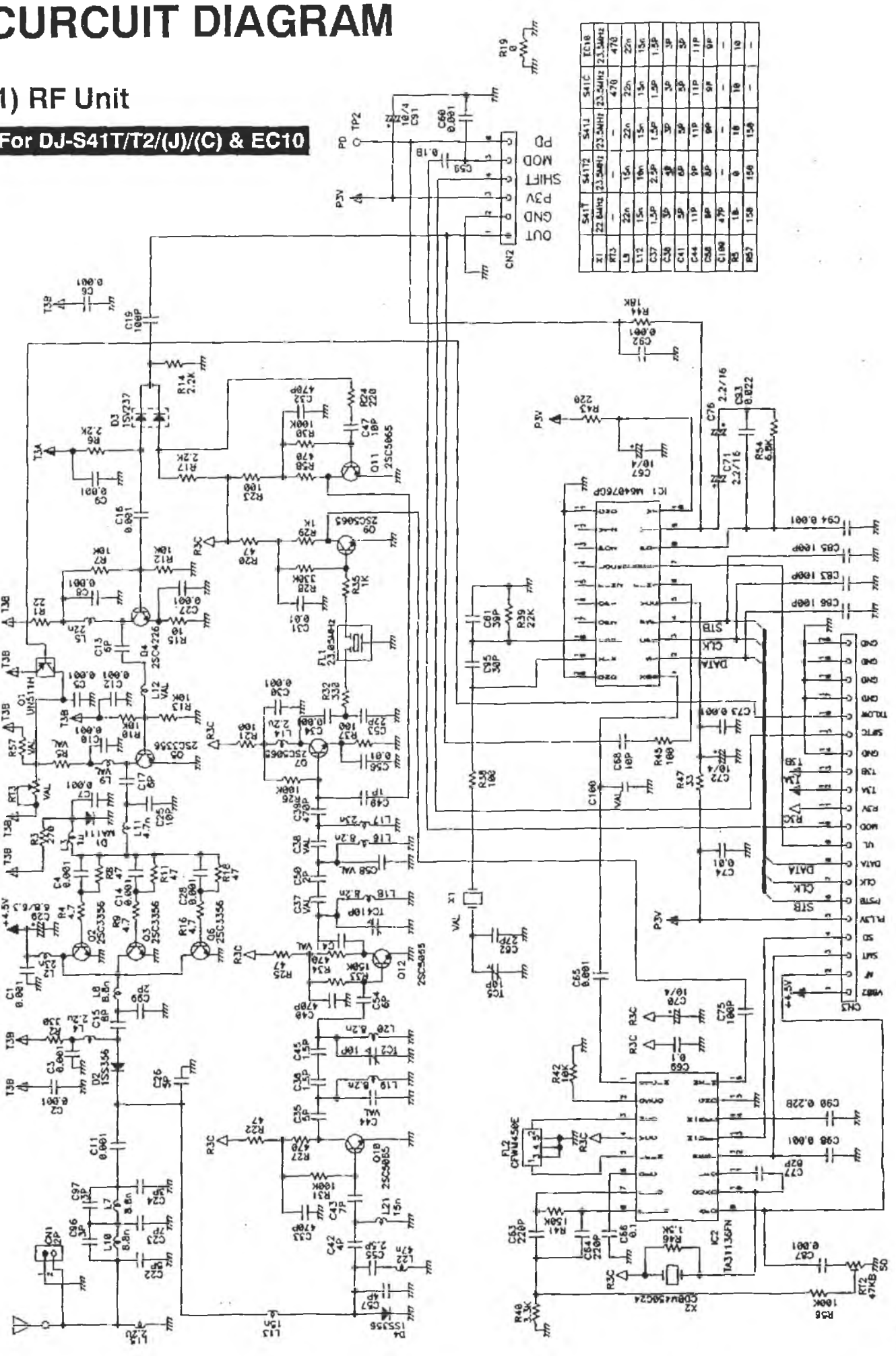
Component side

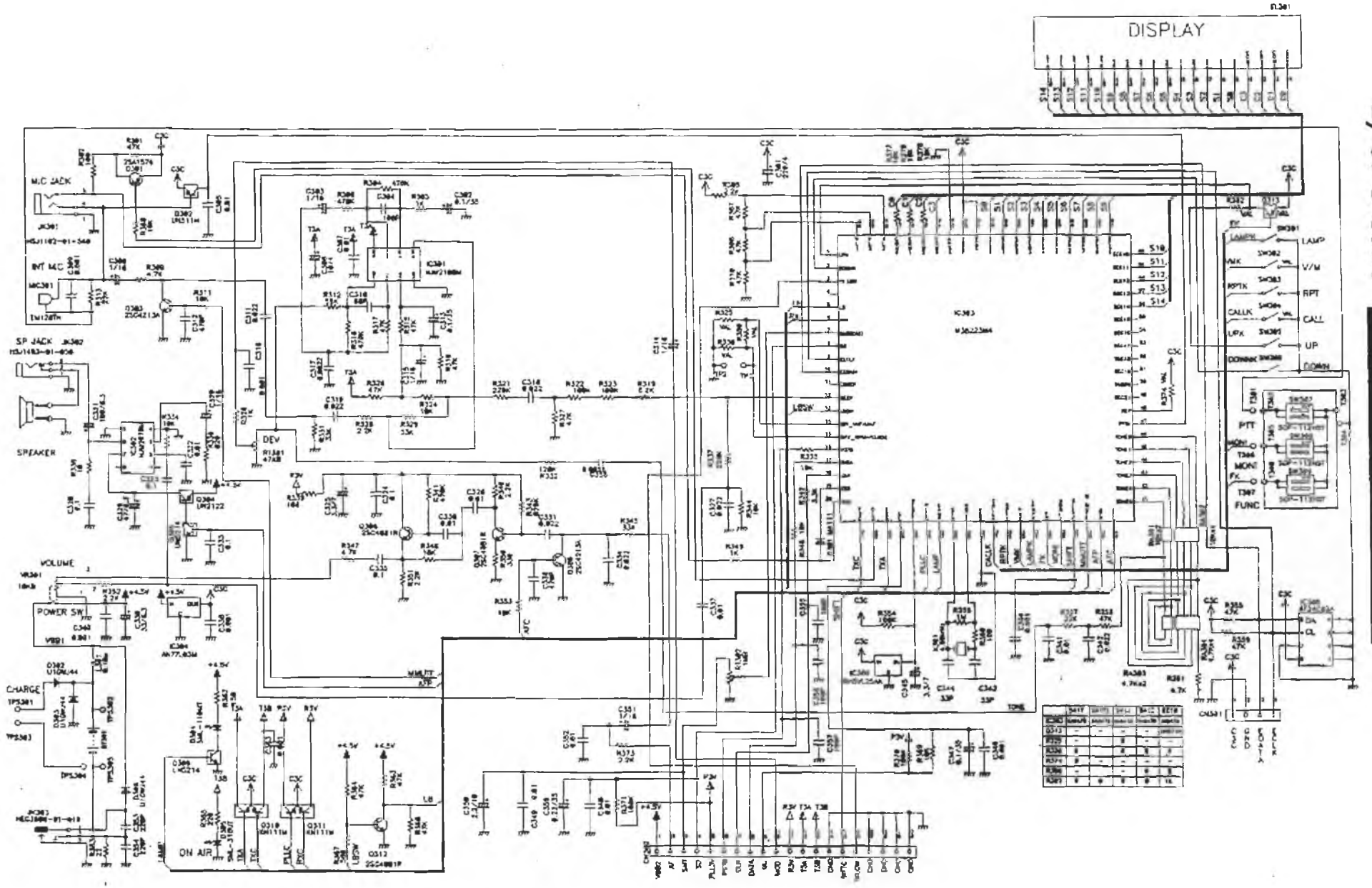


CURCUIT DIAGRAM

1) RF Unit

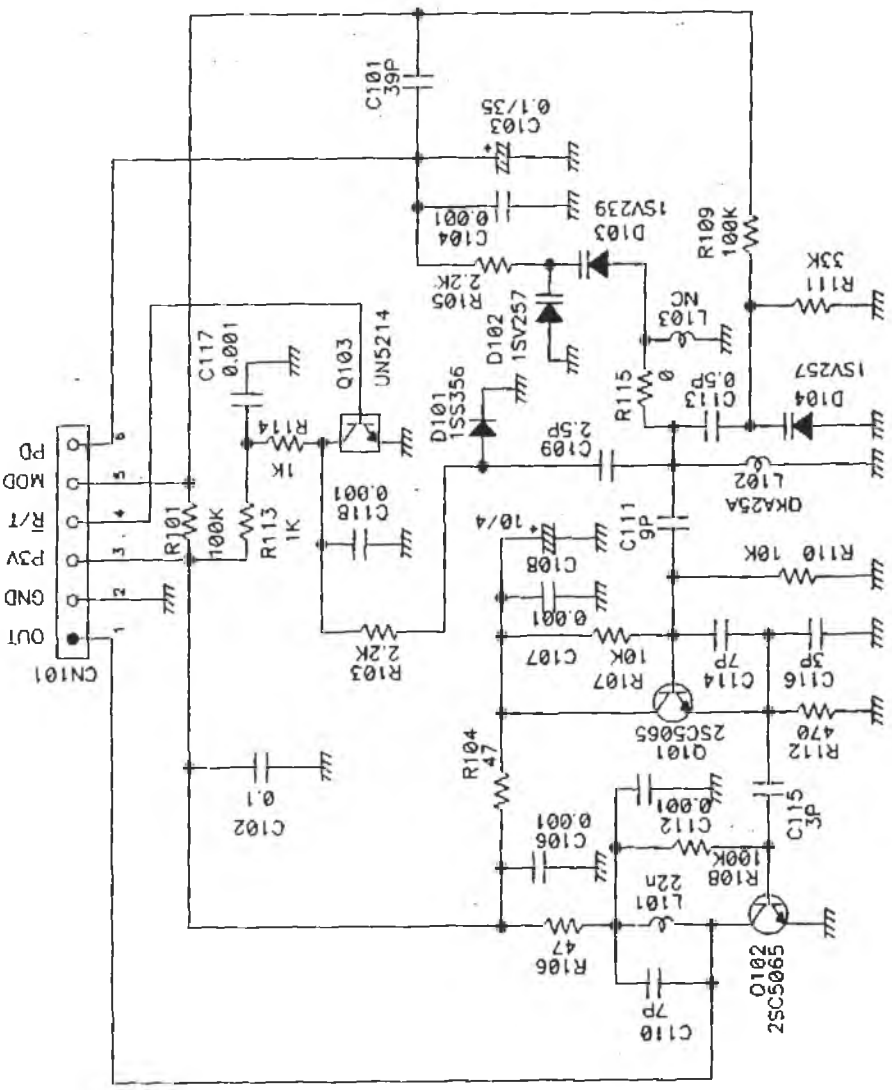
For DJ-S41T/T2/(J)/(C) & EC10





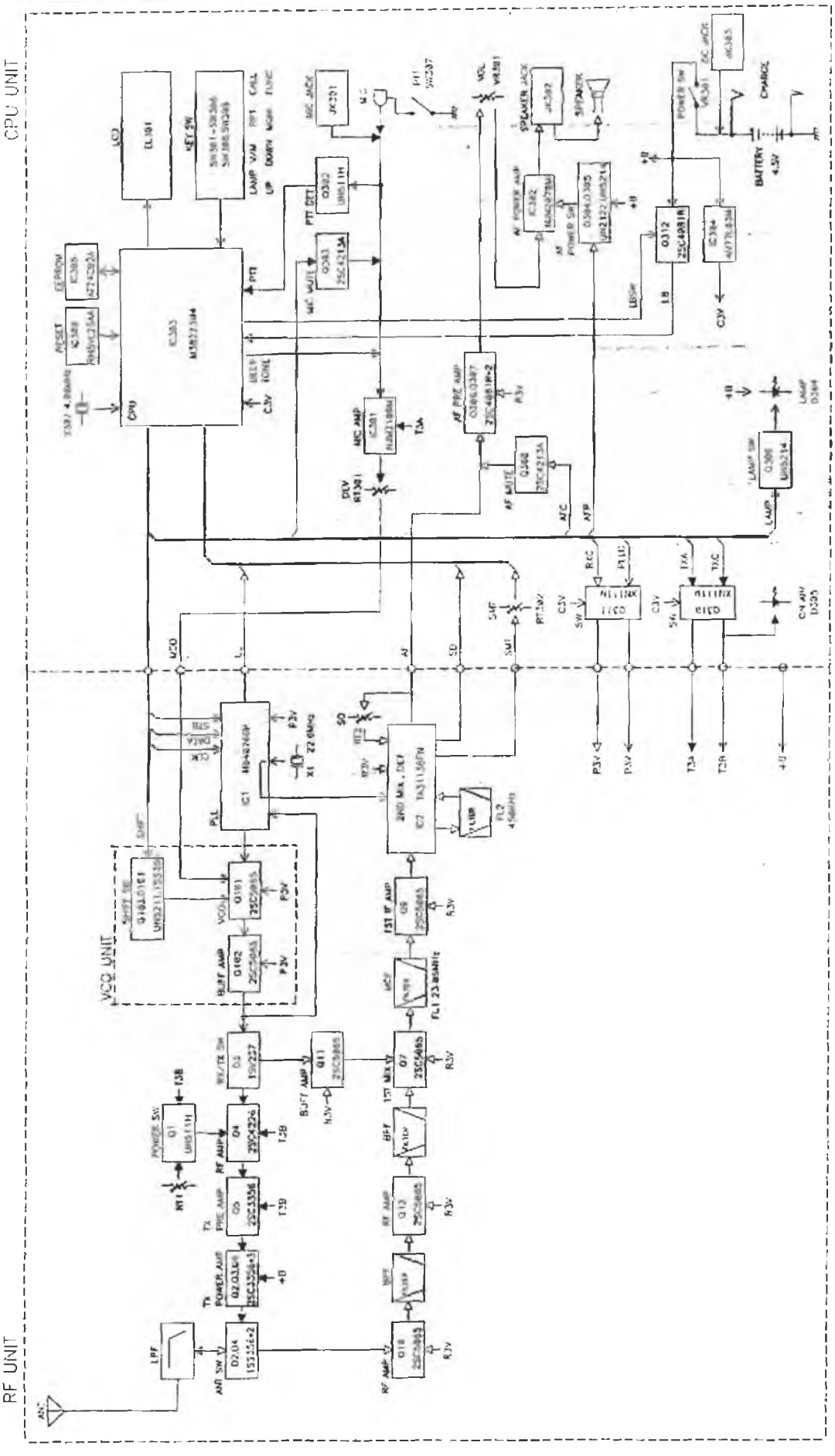
Install ng R383 will make C41 rechargable thru the DC jack (max. 6V DC).

3) VCO Unit **For DJ-S41T/T2/(J)/(C) & EC10**



BLOCK DIAGRAM

For DJ-S41T/T2/(J)/(C) & EC10



RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
C1	CU3035	Chip C.	C1608JB1H102KTA	
C2	CU3035	Chip C.	C1608JB1H102KTA	
C3	CU3035	Chip C.	C1608JB1H102KTA	
C4	CU3035	Chip C.	C1608JB1H102KTA	
C5	CU3035	Chip C.	C1608JB1H102KTA	
C6	CU3035	Chip C.	C1608JB1H102KTA	
C7	CU3035	Chip C.	C1608JB1H102KTA	
C8	CU3035	Chip C.	C1608JB1H102KTA	
C9	CU3035	Chip C.	C1608JB1H102KTA	
C10	CU3035	Chip C.	C1608JB1H102KTA	
C11	CU3035	Chip C.	C1608JB1H102KTA	
C12	CU3035	Chip C.	C1608JB1H102KTA	
C13	CU3016	Chip C.	C1608CH1H270JTA	
C14	CU3035	Chip C.	C1608JB1H102KTA	
C15	CU3029	Chip C.	C1608CH1H470JTA	
C16	CU3035	Chip C.	C1608JB1H102KTA	
C17	CU3016	Chip C.	C1608CH1H270JTA	
C19	CU3023	Chip C.	C1608CH1H201JTA	
C22	CU3015	Chip C.	C1608CH1H220JTA	
C23	CU3016	Chip C.	C1608CH1H270JTA	
C24	CU3015	Chip C.	C1608CH1H220JTA	
C25	CU3011	Chip C.	C1608CH1H100CTA	
C26	CU3012	Chip C.	C1608CH1H120JTA	
C27	CU3035	Chip C.	C1608JB1H102KTA	
C28	CU3035	Chip C.	C1608JB1H102KTA	
C29	CS0236	Chip Tantal	TMCMA0J685MTR	
C30	CU3035	Chip C.	C1608JB1H102KTA	
C31	CU3047	Chip C.	C1608JB1H103KTA	
C32	CU3031	Chip C.	C1608JB1H471KTA	
C33	CU3031	Chip C.	C1608JB1H471KTA	
C34	CU3035	Chip C.	C1608JB1H102KTA	
C35	CU3011	Chip C.	C1608CH1H100CTA	
C38	CU3015	Chip C.	C1608CH1H220JTA	
C41	CU3001	Chip C.	C1608CH1H070CTA	
C42	CU3014	Chip C.	C1608CH1H150JTA	
C43	CU3015	Chip C.	C1608CH1H220JTA	
C46	CS0659	Chip Tantal	F950J476MB	
C47	CU3011	Chip C.	C1608CH1H100CTA	
C49	CU3092	Chip C.	C1608CH1H010CTA	
C53	CU3019	Chip C.	C1608CH1H470JTA	
C55	CU3016	Chip C.	C1608CH1H270JTA	
C56	CU3047	Chip C.	C1608JB1H103KTA	
C57	CU3015	Chip C.	C1608CH1H220JTA	

RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
C59	CU3142	Chip C.	C3012JB1C104KTA	
C60	CU3035	Chip C.	C1608JB1H102KTA	
C61	CU3018	Chip C.	C1608CH1H390JTA	
C62	CU3015	Chip C.	C1608CH1H220JTA	
C63	CU3027	Chip C.	C1608CH1H221JTA	
C64	CU3027	Chip C.	C1608CH1H221JTA	
C65	CU3035	Chip C.	C1608JB1H102KTA	
C66	CU3039	Chip C.	C1608JF1E104ZTA	
C68	CU3011	Chip C.	C1608CH1H100CTA	
C69	CU3039	Chip C.	C1608JF1E104ZTA	
C70	CS0266	Chip Tantal	TMCMA0G106MTR	
C71	CS0213	Chip Tantal	TMCMA1A225MTR	
C72	CS0366	Chip Tantal	TMCMA0G106MTR	
C73	CU3035	Chip C.	C1608JB1H102KTA	
C74	CU3017	Chip C.	C1608JB1H103KTA	
C75	CU3023	Chip C.	C1608CH1H101JTA	
C76	CS0213	Chip Tantal	TMCMA1A225MTR	
C77	CU3022	Chip C.	C1608CH1H820JTA	
C78	CU3012	Chip C.	C1608CH1H120JTA	
C83	CU3023	Chip C.	C1608CH1H101JTA	
C85	CU3023	Chip C.	C1608CH1H101JTA	
C86	CU3023	Chip C.	C1608CH1H101JTA	
C87	CU3035	Chip C.	C1608JB1H102KTA	
C90	CU3046	Chip C.	C3012JB1C224KT-A	
C91	CS0366	Chip Tantal	TMCMA0G106MTR	
C92	CU3035	Chip C.	C1608JB1H102KTA	
C93	CU3051	Chip C.	C1608JB1E223KTA	
C94	CU3035	Chip C.	C1608JB1H102KTA	
C95	CU3016	Chip C.	C1608CH1H270JTA	
C96	CU3006	Chip C.	C1608CH1H050CTA	
C97	CU3006	Chip C.	C1608CH1H050CTA	
C98	CU3035	Chip C.	C1608JB1H102KTA	
C99	CU3015	Chip C.	C1608CH1H220JTA	
CN1	UE0290	Connector	52171B-1-022035-T	
CN3	UE0215	Connector	AXE520C190P	
D1	XD0290	Diode	MA111-TX	
D2	XD0272	Diode	1SS356 TW11	
D3	XD0141	Diode	1SV227 TE85R	
D4	XD0272	Diode	1SS356 TW11	
FL1	XF0013	Crystal Filter	23.050M23M15B3	
FL2	XC0018	Ceramic Filter	CFWM450C	
IC1	XA0352	IC	M64076GP	
IC2	XA0404	IC	TA31136FN(EL)	
L2	QC0403	Chip I.	LQN1A47NJ04	

RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
L3	QC0442	Chip L.	MLF1608A1R0KTA00	
L4	QC0445	Chip L.	MLF1608A2R2KT	
L5	QC0520	Chip L.	LL1608-FR2NK	
L7	QC0402	Chip L.	LQN1A39NJ04	
L8	QC0402	Chip L.	LQN1A39NJ04	
L9	QC0520	Chip L.	LL1608-FR2NK	
L10	QC0402	Chip L.	LQN1A39NJ04	
L13	QC0395	Chip L.	LQN1A33NJ04	
L14	QC0445	Chip L.	MLF1608A2R2KT	
L15	QC0445	Chip L.	MLF1608A2R2KT	
L18	QC0402	Chip L.	LQN1A39NJ04	
L20	QC0402	Chip L.	LQN1A39NJ04	
L21	QC0403	Chip L.	LQN1A47NJ04	
L22	QC0521	Chip L.	LL2012-FR27K	
Q1	XC0166	Transistor	UN5111J-TX	
Q2	XT0142	Transistor	2SC3356T1B R25	
Q3	XT0142	Transistor	2SC3356T1B R25	
Q4	XT0141	Transistor	2SC4226-T1 R24	
Q5	XT0142	Transistor	2SC3356T1B R25	
Q6	XT0142	Transistor	2SC3356T1B R25	
Q7	XT0137	Transistor	2SC5065-O(TE85L)	
Q9	XT0137	Transistor	2SC5065-O(TE85L)	
Q10	XT0137	Transistor	2SC5065-O(TE85L)	
Q11	XT0137	Transistor	2SC5065-O(TE85L)	
R1	RK3018	Chip R.	ERJ3GSYJ220V	
R2	RK3002	Chip R.	ERJ3GSYJ331V	
R3	RK3035	Chip R.	ERJ3GSYJ561V	
R4	RK3010	Chip R.	ERJ3GSYJ4R7V	
R5	RK3014	Chip R.	ERJ3GSYJ100V	
R6	RK3042	Chip R.	ERJ3GSYJ222V	
R7	RK3053	Chip R.	ERJ3GSYJ183V	
R8	RK3022	Chip R.	ERJ3GSYJ470V	
R9	RK3010	Chip R.	ERJ3GSYJ4R7V	
R10	RK3056	Chip R.	ERJ3GSYJ333V	
R11	RK3022	Chip R.	ERJ3GSYJ470V	
R12	RK3050	Chip R.	ERJ3GSYJ103V	
R13	RK3050	Chip R.	ERJ3GSYJ103V	
R14	RK3042	Chip R.	ERJ3GSYJ222V	
R15	RK3014	Chip R.	ERJ3GSYJ100V	
R16	RK3010	Chip R.	ERJ3GSYJ4R7V	
R17	RK3042	Chip R.	ERJ3GSYJ222V	
R18	RK3022	Chip R.	ERJ3GSYJ470V	
R19	RK0107	Chip R.	ERJ6GEY0R00V	
R20	RK3022	Chip R.	ERJ3GSTJ470V	

RF Unit

Ref. No.	Parts No.	Description	Parts Name	Ver.
R21	RK3026	Chip R.	ERJ3GSYJ102V	
R22	RK3022	Chip R.	ERJ3GSYJ470V	
R23	RK3026	Chip R.	ERJ3GSYJ681V	
R24	RK3030	Chip R.	ERJ3GSYJ221V	
R26	RK3002	Chip R.	ERJ3GSYJ331V	
R27	RK3054	Chip R.	ERJ3GSYJ473V	
R28	RK3068	Chip R.	ERJ3GSYJ334V	
R29	RK3038	Chip R.	ERJ3GSYJ102V	
R30	RK3062	Chip R.	ERJ3GSYJ104V	
R31	RK3059	Chip R.	ERJ3GSYJ563V	
R32	RK3032	Chip R.	ERJ3GSYJ331V	
R33	RK3061	Chip R.	ERJ3GSY0R00V	
R34	RK3001	Chip R.	ERJ3GSY0R00V	
R35	RK3038	Chip R.	ERJ3GSYJ102V	
R37	RK3026	Chip R.	ERJ3GSYJ681V	
R38	RK3026	Chip R.	ERJ3GSYJ101V	
R39	RK3054	Chip R.	ERJ3GSYJ223V	
R40	RK3044	Chip R.	ERJ3GSYJ332V	
R41	RK3064	Chip R.	ERJ3GSYJ154V	
R42	RK3050	Chip R.	ERJ3GSYJ103V	
R44	RK3053	Chip R.	ERJ3GSYJ183V	
R45	RK3026	Chip R.	ERJ3GSYJ102V	
R46	RK3040	Chip R.	ERJ3GSYJ152V	
R47	RK3020	Chip R.	ERJ3GSYJ330V	
R48	RK3039	Chip R.	ERJ3GSYJ122V	
R51	RK3048	Chip R.	ERJ3GSYJ682V	
R56	RK3052	Chip R.	ERJ3GSYJ104V	
R57	RK3034	Chip R.	ERJ3GSYJ471V	
R58	RK3026	Chip R.	ERJ3GSYJ681V	
R59	RK3001	Chip R.	ERJ3GSY0000V	
R60	RK3031	Chip R.	ERJ3GSYJ271V	
R61	RK3001	Chip R.	ERJ3GSY0R00V	
R62	RK3001	Chip R.	ERJ3GSY0R00V	
R63	RK3001	Chip R.	ERJ3GSY0R00V	
R64	RK3001	Chip R.	ERJ3GSY0R00V	
R65	RK3001	Chip R.	ERJ3GSY0R00V	
R66	RK3001	Chip R.	ERJ3GSY0R00V	
RT2	RH0146	Trim. Pot	MV322HXBRN473	
TC2	CT0030	Trimmer	CTZ20CW	
TC4	CT0030	Trimmer	CTZ20CW	
TC5	CT0012	Trimmer	CTZ10AW	
TP1	UE0213A	Connector	CONTACT PIN DJS41	
X1	XQ0080	Crystal	38CH7 23.5MHZ	
X2	XE0004	Ceramic Desc.	CDB3M45C24	

Ref. No.	Parts No.	Description	Parts Name	Ver.
W1	MPAL05GG	Wire	#30 Pink 111-050-H1	
	SS0857	Chassis		
	TP0049	Silicon Damper		
	UP0304C	PCB		
		CPU Unit		
C301	CS0612	Chip Tantal	F950J227MC	
C302	CS0063	Chip Tantal	TMCSA1V104MTR	
C303	CS0049	Chip Tantal	TMCSA1C105MTR	
C304	CU3023	Chip C.	C1608CH1H101JTA	
C305	CU3047	Chip C.	C1608JB1H103KTA	
C306	CS0226	Chip Tantal	TMCMA0G106MTR	
C307	CU3047	Chip C.	C1608JB1H103KTA	
C308	CS0049	Chip Tantal	TMCSA1C105MTR	
C309	CU3035	Chip C.	C1608JB1H102KTA	
C310	CU3021	Chip C.	C1608CH1H680JTA	
C311	CU3051	Chip C.	C1608JB1E223KTA	
C312	CU3031	Chip C.	C1608JB1H471KTA	
C313	CS0063	Chip Tantal	TMCSA1V104MTR	
C314	CS0049	Chip Tantal	TMCSA1C105MTR	
C315	CS0049	Chip Tantal	TMCSA1C105MTR	
C316	CU3035	Chip C.	C1608JB1H102KTA	
C317	CU3039	Chip C.	C1608JB1H222KTA	
C318	CU3051	Chip C.	C1608JB1E223KTA	
C319	CU3051	Chip C.	C1608JB1E223KTA	
C320	CS0049	Chip Tantal	TMCSA1C105MTR	
C321	CE0305	Electrolytic C.	6.3CV 1000S	
C322	CU3047	Chip C.	C1608JB1H103KTA	
C323	CU3059	Chip C.	C1608JF1E104ZTA	
C324	CU3059	Chip C.	C1608JF1E104ZTA	
C325	CS0267	Chip Tantal	TMCMA1H335MTR	
C326	CU3047	Chip C.	C1608JB1H103KTA	
C327	CU3051	Chip C.	C1608JB1E223KTA	
C328	CU3059	Chip C.	C1608JF1E104ZTA	
C329	CS0368	Chip Tantal	TMCMC0J476MTR	
C330	CU3047	Chip C.	C1608JB1H103KTA	
C331	CU3051	Chip C.	C1608JB1E223KTA	
C333	CU3059	Chip C.	C1608JF1E104ZTA	
C334	CU3051	Chip C.	C1608JB1E223KTA	
C335	CU3059	Chip C.	C1608JF1E104ZTA	
C336	CU3031	Chip C.	C1608JB1H471KTA	
C337	CU3047	Chip C.	C1608JB1H103KTA	
C338	CU3035	Chip C.	C1608JB1H102KTA	
C339	CS0211	Chip Tantal	TMCMC0J336MTR	
C340	CU3035	Chip C.	C1608JB1H102KTA	

Ref. No.	Parts No.	Description	Parts Name	Ver.
C341	CU3047	Chip C.	C1608JB1H103KTA	
C342	CU3051	Chip C.	C1608JB1E223KTA	
C343	CU3017	Chip C.	C1608CH1H330JTA	
C344	CU3017	Chip C.	C1608CH1H330JTA	
C345	CS0207	Chip Tantal	TMCMA0J335MTR	
C346	CU3035	Chip C.	C1608JB1H102KTA	
C347	CS0063	Chip Tantal	TMCSA1V104MTR	
C348	CU3047	Chip C.	C1608JB1H103KTA	
C349	CU3047	Chip C.	C1608JB1H103KTA	
C350	CS0213	Chip Tantal	TMCMA1A225MTR	
C351	CS0049	Chip Tantal	TMCSA1C105MTR	
C352	CU3047	Chip C.	C1608JB1H103KTA	
C353	CU3027	Chip C.	C1608CH1H221JTA	
C354	CU3027	Chip C.	C1608CH1H221JTA	
C355	CU3021	Chip C.	C1608CH1H680JTA	
C356	CU3013	Chip C.	C1608CH1H100JTA	
C357	CU3023	Chip C.	C1608CH1H680JTA	
C358	CU3044	Chip C.	C1608JB1H562KTA	
C359	CS0061	Chip Tantal	TMCSA1V224MTR	
C363	CU3035	Chip C.	C1608JB1H102KTA	
C364	CU3035	Chip C.	C1608JB1H102KTA	
CN302	US0214	Connector	AXN420630P	
D301	XD0250	Diode	MA111-TX	
D302	XD0225	Diode	U1GWJ44 TE12R	
D303	XD0225	Diode	U1GWJ44 TE12R	
D304	XL0037	Diode	SML-310MTT86	
D305	XL0038	Diode	SML-310UTT86	
D306	XD0225	Diode	U1GWJ44 TE12R	
EL301	EL0033AZ	LCD	LCD	
IC301	XA0209	IC	NJM2100M TI	
IC302	XA0210	IC	NJM2070M TI	
IC303	XA0513	IC	M38223M4-415FP	
IC304	XA0259	IC	AN7711SM E1	
IC305	XA0364	IC	AT24C020-10SI-2.7	
IC306	XA0309	IC	RH5VL25AA-TI	
JK301	UJ0022	MIC Jack	HSJ1102-01-510	
JK302	UJ0016	SP Jack	HSJ1493-01-050	
JK303	UJ0026	DC Jack	HEC1600-010010	
L301	QC0279	Chip L	NL252018T18J	
MIC301	EY0012	MIC	EM-123T	
Q301	XT0094	Transistor	2SA1576A TE85R	
Q302	XU0166	Transistor	UN511H-TX	
Q303	XT0105	Transistor	2SC4213A-TE85L	
Q304	XU0167	Transistor	UN2122-TX	

Ref. No.	Parts No.	Description	Parts Name	Ver.
Q305	XU0072	Transistor	UN5214 TX	
Q306	XT0095	Transistor	2SC4081 T106R	
Q307	XT0095	Transistor	2SC4081 T106R	
Q308	XT0165	Transistor	2SC4213A-TE85L	
Q309	XU0052	Transistor	UN5214 TX	
Q310	XU0346	Transistor	XN1111M TX	
Q311	XU0043	Transistor	XN1111M TX	
Q312	XT0095	Transistor	2SC4081 T106R	
R301	RK3068	Chip R.	ERJ3GSYJ473V	
R302	RK3051	Chip R.	ERJ14YJ101V	
R303	RK3039	Chip R.	ERJ3GSYJ102V	
R304	RK3070	Chip R.	ERJ3GSYJ474V	
R305	RK3042	Chip R.	ERJ3GSYJ222V	
R306	RK3070	Chip R.	ERJ3GSYJ474V	
R307	RK3068	Chip R.	ERJ3GSYJ473V	
R308	RK3068	Chip R.	ERJ3GSYJ473V	
R309	RK3046	Chip R.	ERJ3GSYJ472V	
R310	RK3068	Chip R.	ERJ3GSYJ473V	
R311	RK3050	Chip R.	ERJ3GSYJ103V	
R312	RK3069	Chip R.	ERJ3GSYJ563V	
R313	RK3064	Chip R.	ERJ3GSYJ223V	
R315	RK3068	Chip R.	ERJ3GSYJ473V	
R316	RK3070	Chip R.	ERJ3GSYJ474V	
R317	RK3068	Chip R.	ERJ3GSYJ473V	
R318	RK3068	Chip R.	ERJ3GSYJ473V	
R319	RK3049	Chip R.	ERJ3GSYJ822V	
R320	RK3068	Chip R.	ERJ3GSYJ473V	
R321	RK3066	Chip R.	ERJ3GSYJ224V	
R322	RK3062	Chip R.	ERJ3GSYJ104V	
R323	RK3062	Chip R.	ERJ3GSYJ104V	
R324	RK3050	Chip R.	ERJ3GSYJ103V	
R325	RK3001	Chip R.	ERJ3GSY0R00V	E
R326	RK3031	Chip R.	ERJ3GSYJ102V	
R327	RK3068	Chip R.	ERJ3GSYJ473V	
R328	RK3042	Chip R.	ERJ3GSYJ222V	
R329	RK3056	Chip R.	ERJ3GSYJ333V	
R330	RK3001	Chip R.	ERJ3GSY0R00V	
R331	RK3056	Chip R.	ERJ3GSYJ333V	
R332	RK3063	Chip R.	ERJ3GSYJ124V	
R334	RK3050	Chip R.	ERJ3GSYJ103V	
R335	RK3050	Chip R.	ERJ3GSYJ103V	
R336	RK3017	Chip R.	ERJ3GSYJ821V	
R337	RK3066	Chip R.	ERJ3GSYJ224V	
R338	RK3014	Chip R.	ERJ3GSYJ150V	

Ref. No.	Parts No.	Description	Parts Name	Ver.
R339	RK3026	Chip R.	ERJ3GSYJ101V	
R340	RK3042	Chip R.	ERJ3GSYJ222V	
R341	RK3070	Chip R.	ERJ3GSYJ474V	
R342	RK3044	Chip R.	ERJ3GSYJ332V	
R343	RK3073	Chip R.	ERJ3GSYJ824V	
R344	RK3050	Chip R.	ERJ3GSYJ103V	
R345	RK3056	Chip R.	ERJ3GSYJ333V	
R346	RK3050	Chip R.	ERJ3GSYJ103V	
R347	RK3046	Chip R.	ERJ3GSYJ472V	
R348	RK3063	Chip R.	ERJ3GSYJ163V	
R349	RK3038	Chip R.	ERJ3GSYJ102V	
R350	RK3032	Chip R.	ERJ3GSYJ331V	
R351	RK3042	Chip R.	ERJ3GSYJ222V	
R352	RK3042	Chip R.	ERJ3GSYJ222V	
R353	RK3050	Chip R.	ERJ3GSYJ103V	
R354	RK3062	Chip R.	ERJ3GSYJ104V	
R355	RK3068	Chip R.	ERJ3GSYJ473V	
R356	RK3074	Chip R.	ERJ3GSYJ105V	
R357	RK3064	Chip R.	ERJ3GSYJ223V	
R358	RK3069	Chip R.	ERJ3GSYJ473V	
R359	RK3068	Chip R.	ERJ3GSYJ473V	
R360	RK3026	Chip R.	ERJ3GSYJ101V	
R361	RK3046	Chip R.	ERJ3GSYJ472V	
R362	RK3025	Chip R.	ERJ3GSYJ151V	
R363	RK3068	Chip R.	ERJ3GSYJ473V	
R364	RK3068	Chip R.	ERJ3GSYJ473V	
R365	RK3030	Chip R.	ERJ3GSYJ221V	
R366	RK3069	Chip R.	ERJ3GSYJ473V	
R367	RK3035	Chip R.	ERJ3GSYJ561V	
R368	RK3050	Chip R.	ERJ3GSYJ103V	
R369	RK3050	Chip R.	ERJ3GSYJ103V	
R370	RK3062	Chip R.	ERJ3GSYJ104V	
R371	RK3062	Chip R.	ERJ3GSYJ104V	
R373	RK3042	Chip R.	ERJ3GSYJ222V	
R377	RK3050	Chip R.	ERJ3GSYJ103V	
R378	RK3050	Chip R.	ERJ3GSYJ103V	
R379	RK3050	Chip R.	ERJ3GSYJ103V	
R382	RK3001	Chip R.	ERJ3GSY0R00V	
R383	RK4053	Chip R.	ERJ14YJ220V	
RA301	RA0021	Chip R.	EXBV4V103JV	
RA302	RA0011	Chip R.	EXBV8V103JV	
RA303	RA0022	Chip R.	EXBV4V472JV	
RA304	RA0010	Chip R.	EXBV8V472JV	
RT301	PH0146	Chip R.	MVR22HXBRN473	

Ref. No	Parts No.	Description	Parts Name	Ver.
RT101	RH0154	Chip R.	MVR22HX8R8M106	
SW307	UU0018	Switch	SOP-112HST	
SW308	UU0018	Switch	SOP-112HST	
SW309	UU0018	Switch	SOP-112HST	
VR301	RV9025	Chip R.	TP06N00N	
X201	XQ3072	Crystal	38C4.0000MHZ	
	AP0005	Screw	2+3.5FeNi	
	DG0020		LCD Light	
	FG0064		Mic Holder	
	FG0170A		Rubber Connector	
	FG0229		Mic Cushion	
	FW6002		Mic Spacer	
	ST0041		LCD Holder	
	TL0013		Reflection Sheet	
	TN0001		Mic Shield	
	TZ0072		Insulation Tape	
	YZ9145		Adhesive Tape	
			VCO Unit	
C101	CU3018	Chip C.	C1608CH1H330JTA	
C102	CU3059	Chip C.	C1608JF1E104ZTA	
C103	CS3063	Chip Tantal	TMCSA1V104MTR	
C104	CU3036	Chip C.	C1608JB1H102KTA	
C106	CU3035	Chip C.	C1608JB1H103KTA	
C107	CU3035	Chip C.	C1608JB1H102KTA	
C108	CS3066	Chip Tantal	TMCMA0G106MTR	
C110	CU3006	Chip C.	C1608CH1H070CTA	
C111	CU3014	Chip C.	C1608CH1H080JTA	
C112	CU3036	Chip C.	C1608JB1H102KTA	
C113	CU3002	Chip C.	C1608CH1H010CTA	
C114	CU3017	Chip C.	C1608CH1H330JTA	
C115	CU3004	Chip C.	C1608CH1H030CTA	
C116	CU3016	Chip C.	C1608CH1H220JTA	
CN101	UD0216	Pin Header	2230B-1-06T054T	
D102	XD0314	Diode	HVU359 TRF	
D103	XD0314	Diode	HVU359 TRF	
D104	XD0314	Diode	HVU359 TRF	
L101	QC0520	Chip L	LL1608-FR22NK	
L102	QKA66A	Coil	MRL5 11.5T 0.4	
Q101	XT0137	Transistor	2SC5065-O(TE85L)	
Q102	XT0137	Transistor	2SC5065-O(TE85L)	
R101	RK3062	Chip R.	ERJ3GSYJ104V	
R104	RK3022	Chip R.	ERJ3GEYJ470V	
R105	RK3042	Chip R.	ERJ3GSYJ222V	
R106	RK3022	Chip R.	ERJ3GEYJ470V	

Ref. No.	Parts No.	Description	Parts Name	Ver.
R107	RK3054	Chip R.	ERJ3GSYJ103V	
R108	RK3042	Chip R.	ERJ3GSYJ104V	
R109	RK3062	Chip R.	ERJ3GSYJ104V	
R111	RK3056	Chip R.	ERJ3GSYJ331V	
R112	RK3034	Chip R.	ERJ3GSYJ471V	
R115	RK3001	Chip R.	ERJ3GSY0R00V	
	TS0117		VCO Case	
			Mechanical Parts	
	AP0005	Screw	2+3.5FeNi	
	AN9007	Nut	M4*0.7FeNi	
	AN0012	Nut	Dial Nut	
	AX0004	Screw	2+5FeBC	
	DP0107		LCD Panel	
	KA0062	Antenna	Antenna	
	ES0011AZ	Speaker	036M9014	
	FG0077		Battery Cushion	
	FG0106		SP Cushion	
	FG0109		Battery Rubber	
	FG0132		Battery Rubber L	
	FG0161		ON AIR Light	
	FG0162		SCAN Rubber Key	
	FG0167		MIC Sheet	
	FG0221		UD Rubber Key	
	FG0223		LAMP Rubber Key	
	FG0224		VM Rubber Key	
	FJ0086		Hinge Pin	
	FM0150		Antenna Ground	
	FP0104		Lock Lever	
	KB0063		Rear Cabinet	
	KM0032		Battery Cover	
	KZ0065Y		Front Cabinet	
	KZ0066Y		LCD Panel	
	MPAL04GG	Wire	#10 Black H1.040-H1	
	MRCL02AA	Wire	#30 Black 2-020-2	
	MRCL02AA	Wire	#30 Red 2-020-2	
	NK0063		VOL Knob	
	SD0027A		Battery Terminal B	
	SD0028		Battery Terminal C	
	SD0041		Plus Spring	
	SD0042		Minus Spring	
	SD0043B		Charge Spring	
	SD0044		Charge Terminal	
	ST0075Z		Speaker Fixture	
	TW0007B		Jack Rubber Key	

Ref. No.	Parts No.	Description	Parts Name	Ver.
	TW0008		Cover Rubber	
	TW0009		Battery Rubber	
	TZ0059		Insulation Sheet	
	TZ0073		Insulation Sheet	
			Packing	
	DS0387		Spec. Sheet	T
	DS0388		Spec. Sheet	E
	IL20008A		Fixture	
	HX0420		Item Carton	
	HX0433B		Item Carton Insets	
	HP0026		Protection Bag	
	PH0008A		Registration Card	T
	PH0237		FCC Part 15 Seal	T
	PH0309		CE Label	E
	PS0251		Instruction Manual	
	PT0004A		Lot Number Seal	
	FP0105		Belt Clip	
	AP0006		Belt Clip Screw	
	AZ0029		PE Washer	
	BZ0007		Hand Strap	

Ref. No.	Parts No.	Description	Parts Name	Ver.

ADJUSTMENT

For DJ-S11T/E

1) Required Test Equipment

1. Digital Multimeter

2. Regulated Power Supply

Supply voltage: 5.5VDC
Current: 1A or more

3. Oscilloscope

Measurable frequency: Audio Frequency

4. Spectrum Analyzer

Measuring range: Up to 2GHz or more

5. Power Meter

Measurable frequency: Up to 500MHz
Impedance: 50Ω
Power: 1W or more

6. Speaker

Impedance: 8Ω

7. SSG

Output frequency: Up to 1GHz
Output level: -20dB/0.1μV to120dB/1V
Modulation: FM

8. Transceiver Tester

Up to 500MHz

a. Frequency Counter

b. Power Meter

Impedance: 50Ω
Measuring range: 1W or more

c. Audio Voltmeter

Measurable frequency: 50Hz ~ 10kHz
Sensitivity: 1mV ~ 10V

d. Distortion Meter

Measurable frequency: 1kHz
Input level: Up to 40dB
Distortion level: 1% ~ 100%

e. Audio Generator

Output frequency: 1kHz ~ 10kHz
Output impedance: 600Ω

f. Linear Detector

Note:

1. 5.5V of power voltage is supplied from DC jack.
2. The transmitter system should be adjusted or inspected in high power.

2) Adjustment **For DJ-S11T/E**

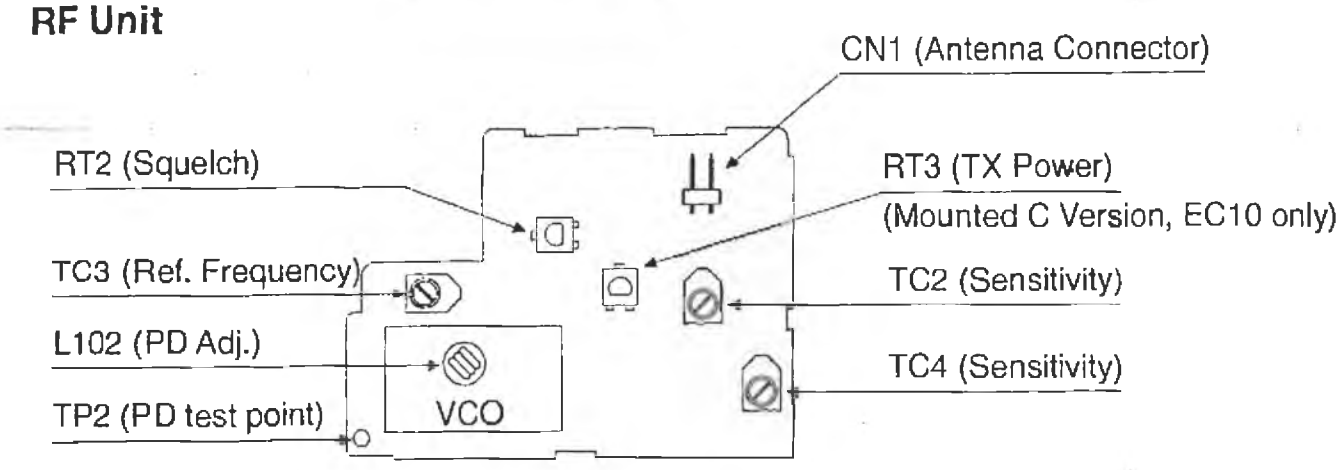
Item	Condition	Measurement			Adjustment			Specificartions
		Equipment	Unit	Terminal	Unit	Parts	Method	
PLL VCO	f=146.00 RX	Digital Multimeter	RF	PD	VCO		See *1	0.9 ~ 1.1V
	f=145.95 TX					-	Check	3.0V or below
Reference Frequency	f=145.00 TX	Freq. Counter			RF	TC5	f=145.00	±100Hz
TX Power Hi	f=145.00 TX DC=5.5V See *2.	Poer Meter	RF	ANT	-	-	Check	340mW or more
TX Power Low							Check	150mW or below
Diviation	f=145.00 TX AG: 1kHz 50mV(-30dBm)	Linear Det. Oscilloscope Power Meter AG	RF	ANT	CPU	RT301	4.5±0.1kHz	4.5±0.1kHz
Tone	f=145.00 TX						Check	0.4 ~ 1.3kHz
Sensitivity	f=145.05 RX	SSG Distortion Meter Oscilloscope Level Meter	RF	ANT	RF	TC2,4	12dB SINAD max.	-8dBμ (EMF) or below
Squelch	f=145.05 RX Output:-12dBμ Mod: ON				RF	RT2	SQ Open	-15dBμ>Close -9dBμ<Open
S meter	f=145.05 RX Output:+12dBμ Mod: ON				CPU	RT302	All digits are lit up.	

*1:Extend the coil L102 so that the P.D. voltage becomes 1.0±0.1V

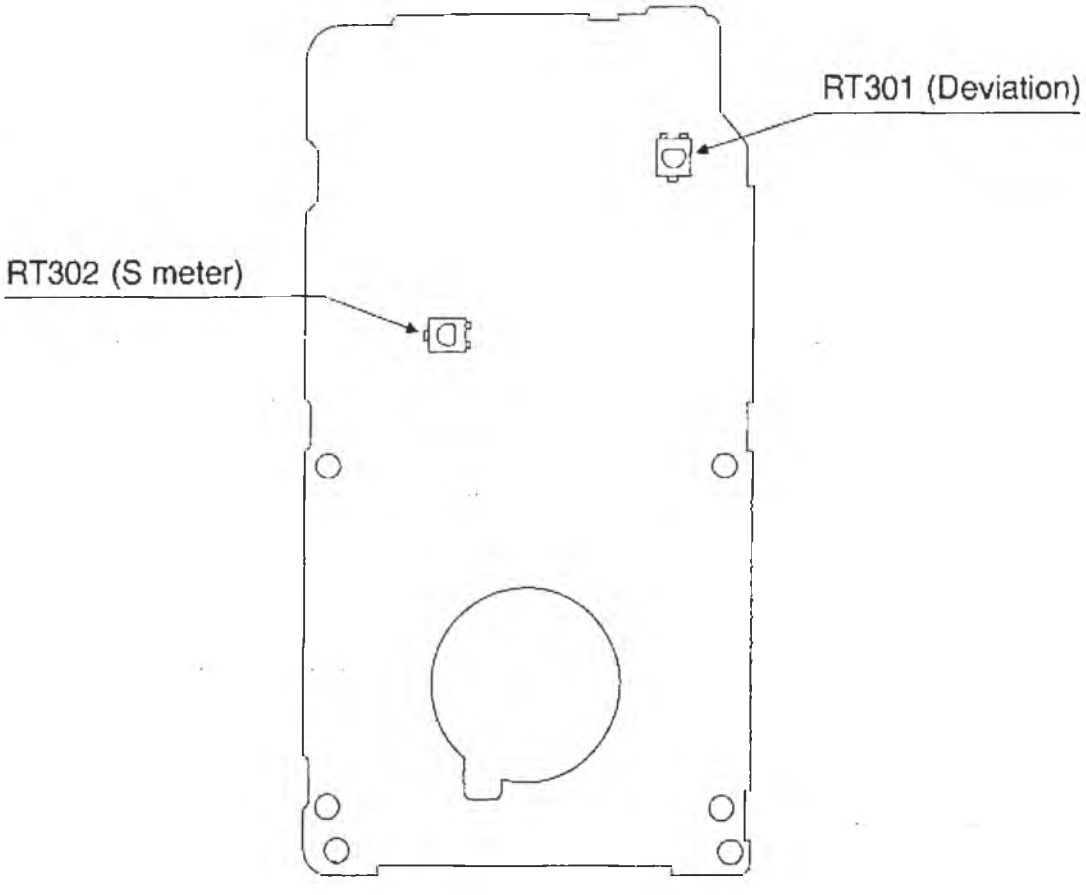
*2:Switching to Low power

3) Adjustment Points **For DJ-S11T/E**

RF Unit



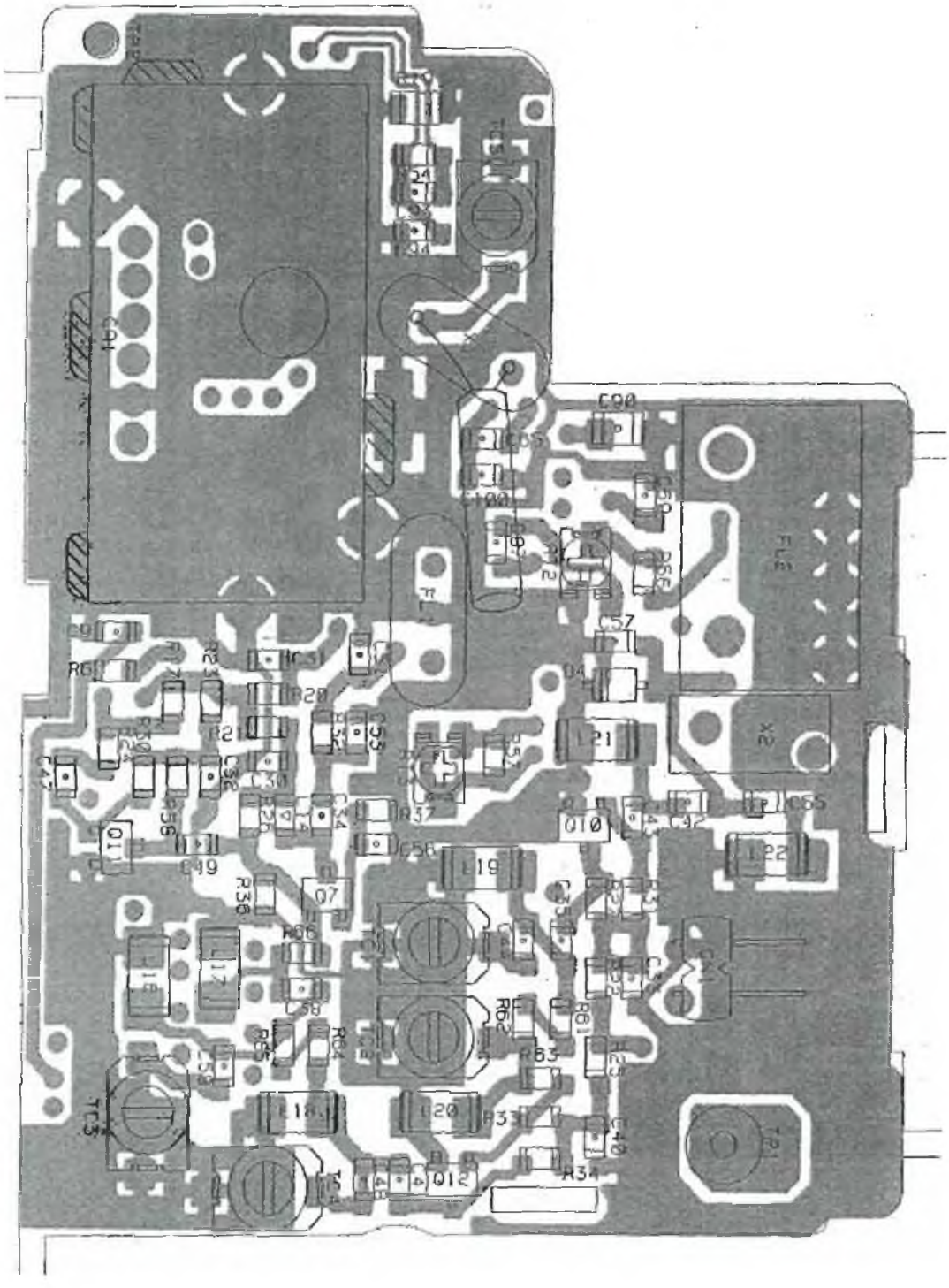
CPU Unit



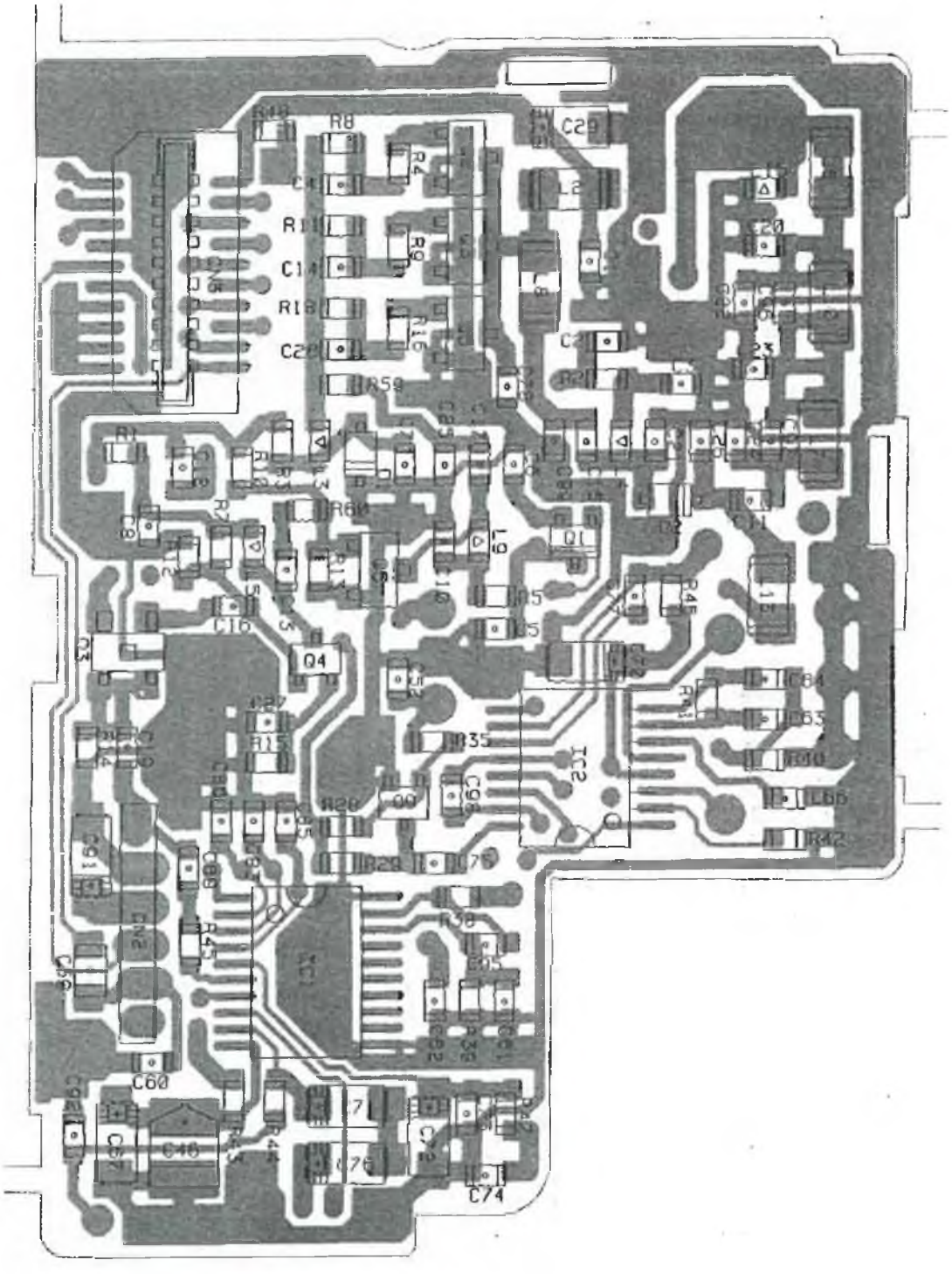
PC BOARD VIEW

1) RF Unit

Component side **For DJ-S11T/E**

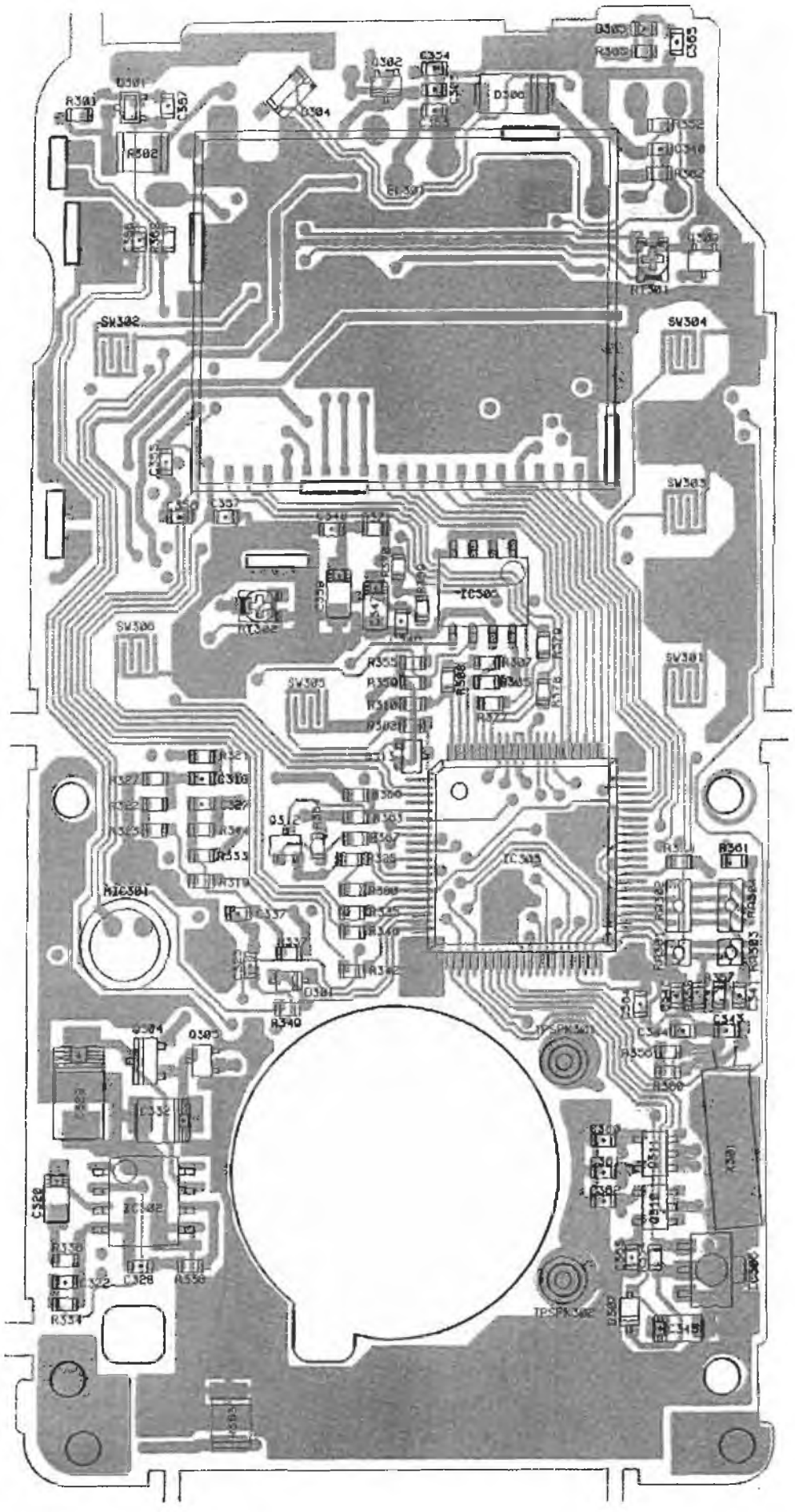


Solder side **For DJ-S11T/E**



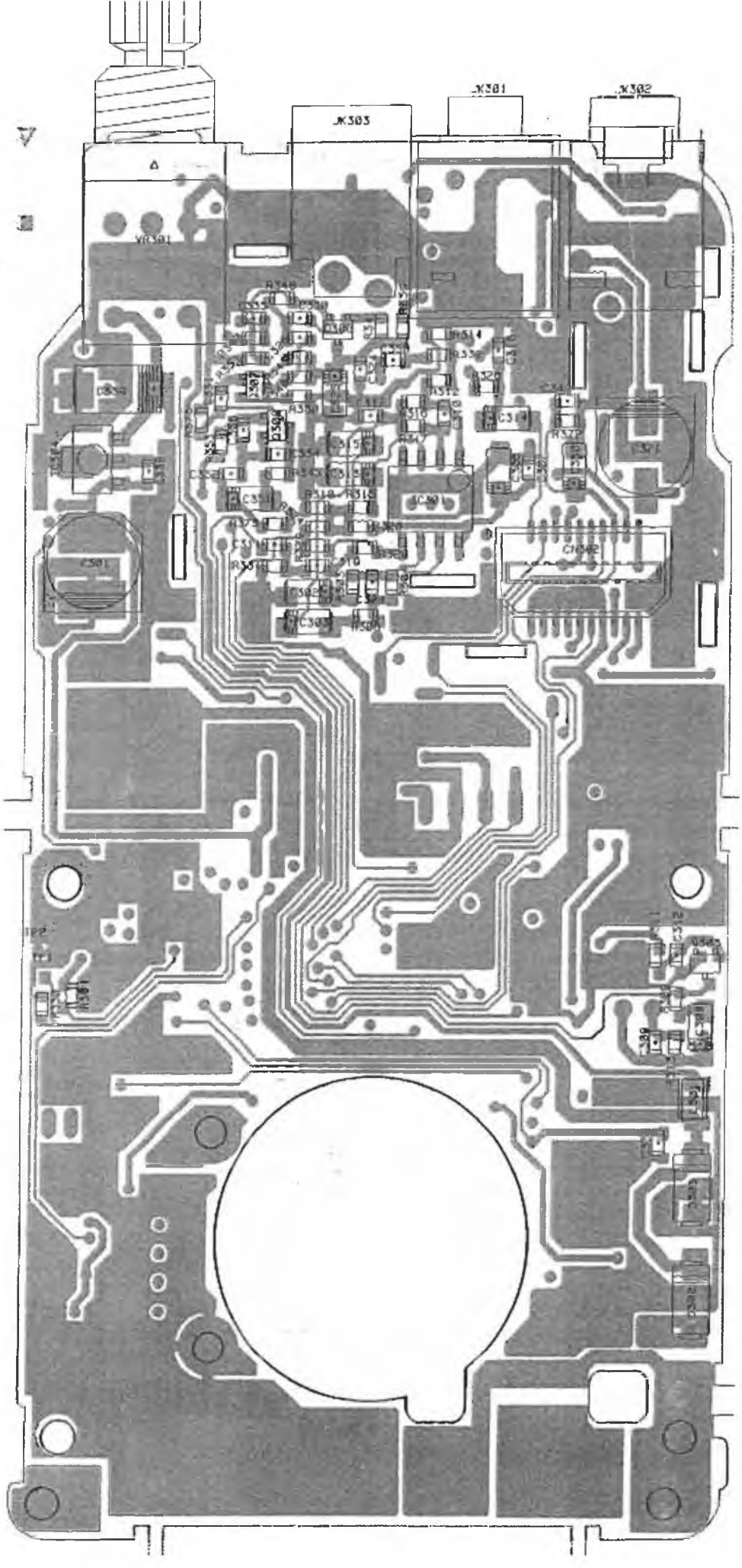
2) CPU UNIT
Component side

For DJ-S11T/E



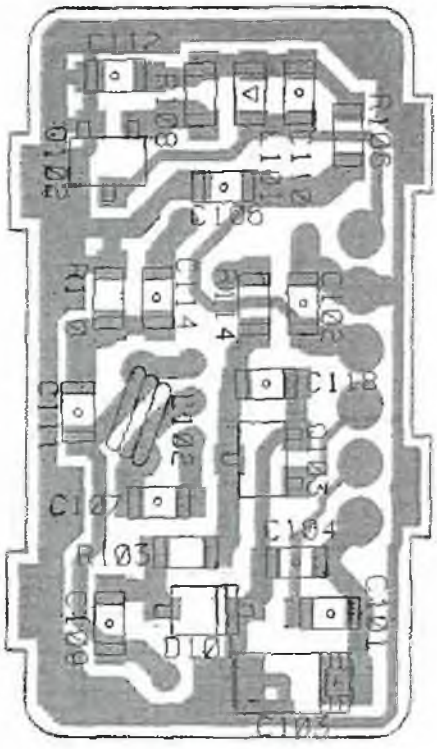
Solder side

For DJ-S11T/E

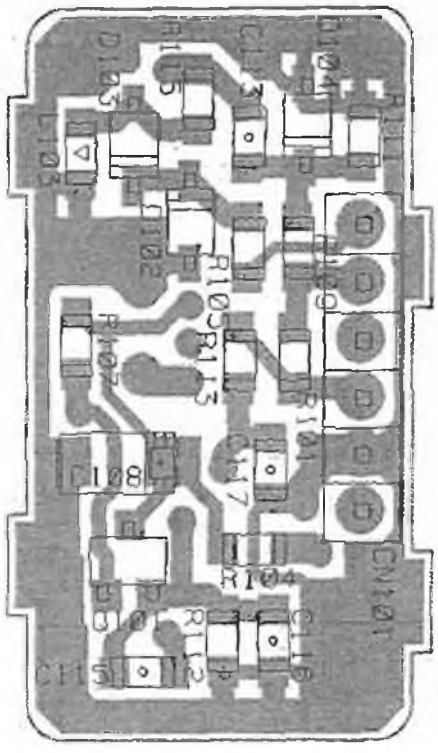


3) VCO Unit For DJ-S11T/E

Component side

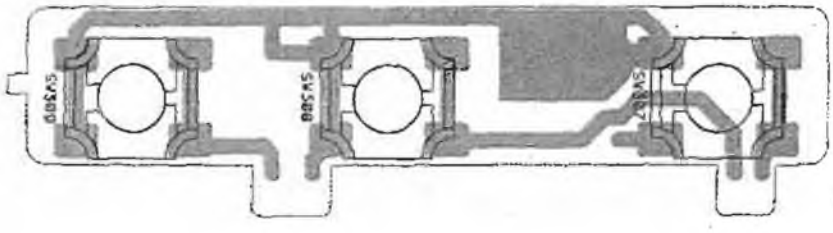


Solder side



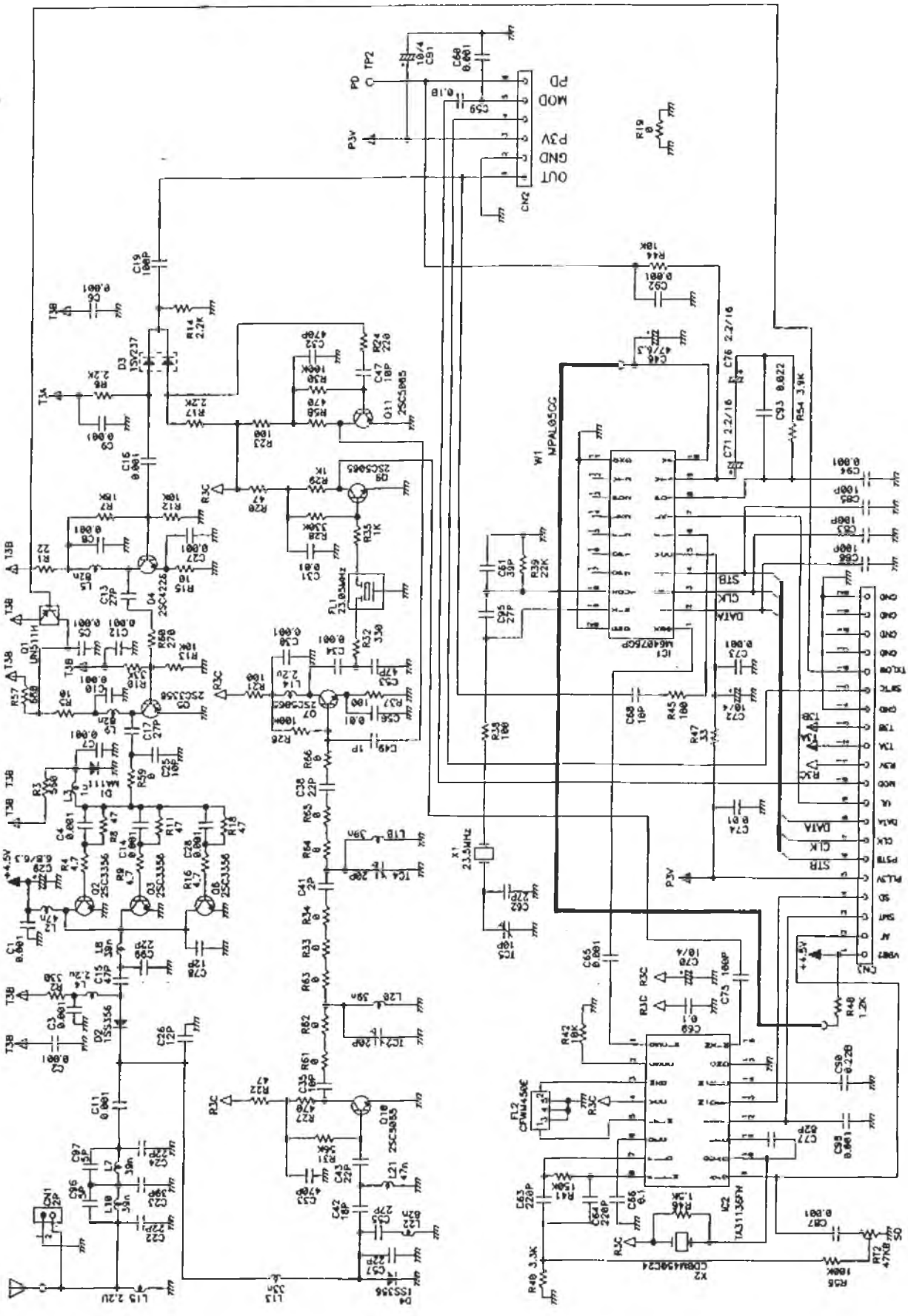
4) SW Unit For DJ-S11T/E

Component side

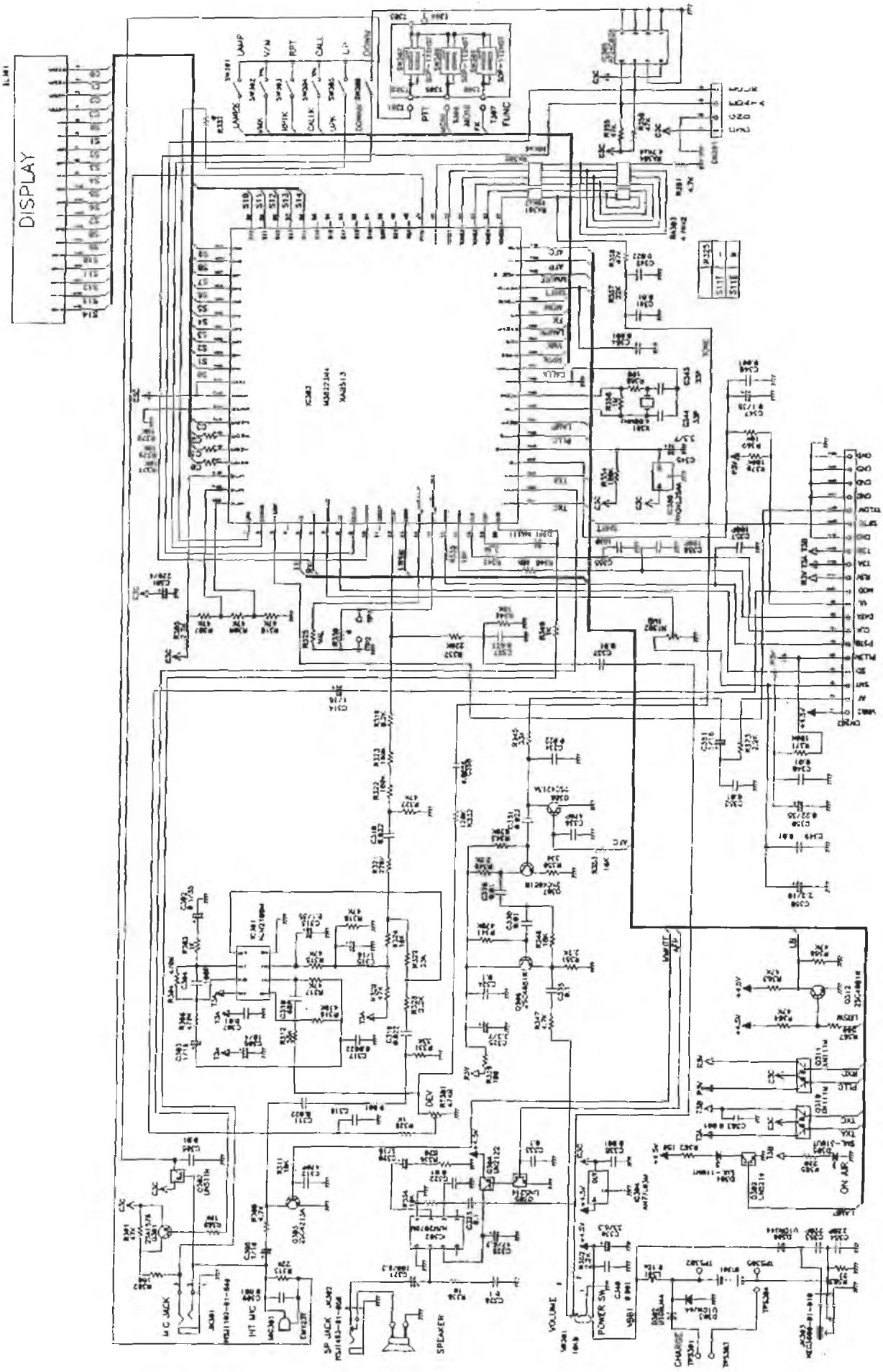


CURCUIT DIAGRAM

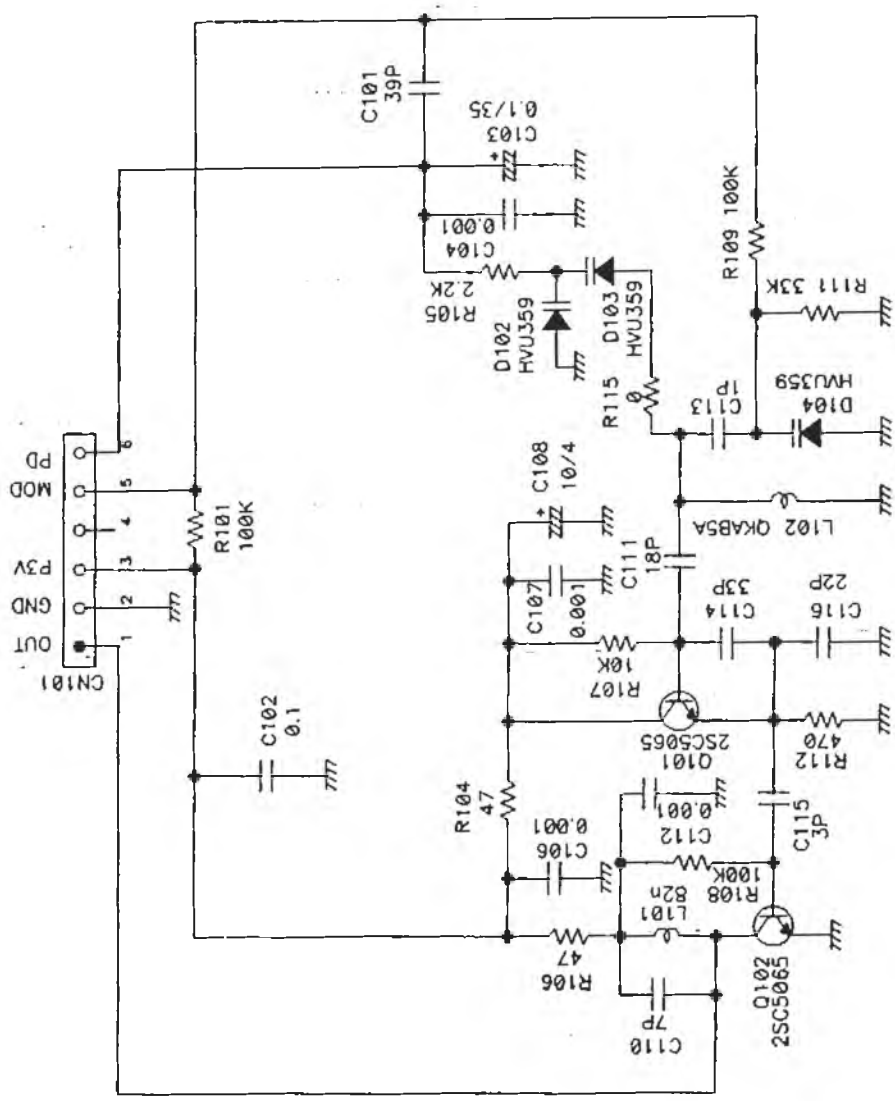
1) RF Unit For DJ-S11T/E



2) CPU UNIT **For DJ-S11T/E**

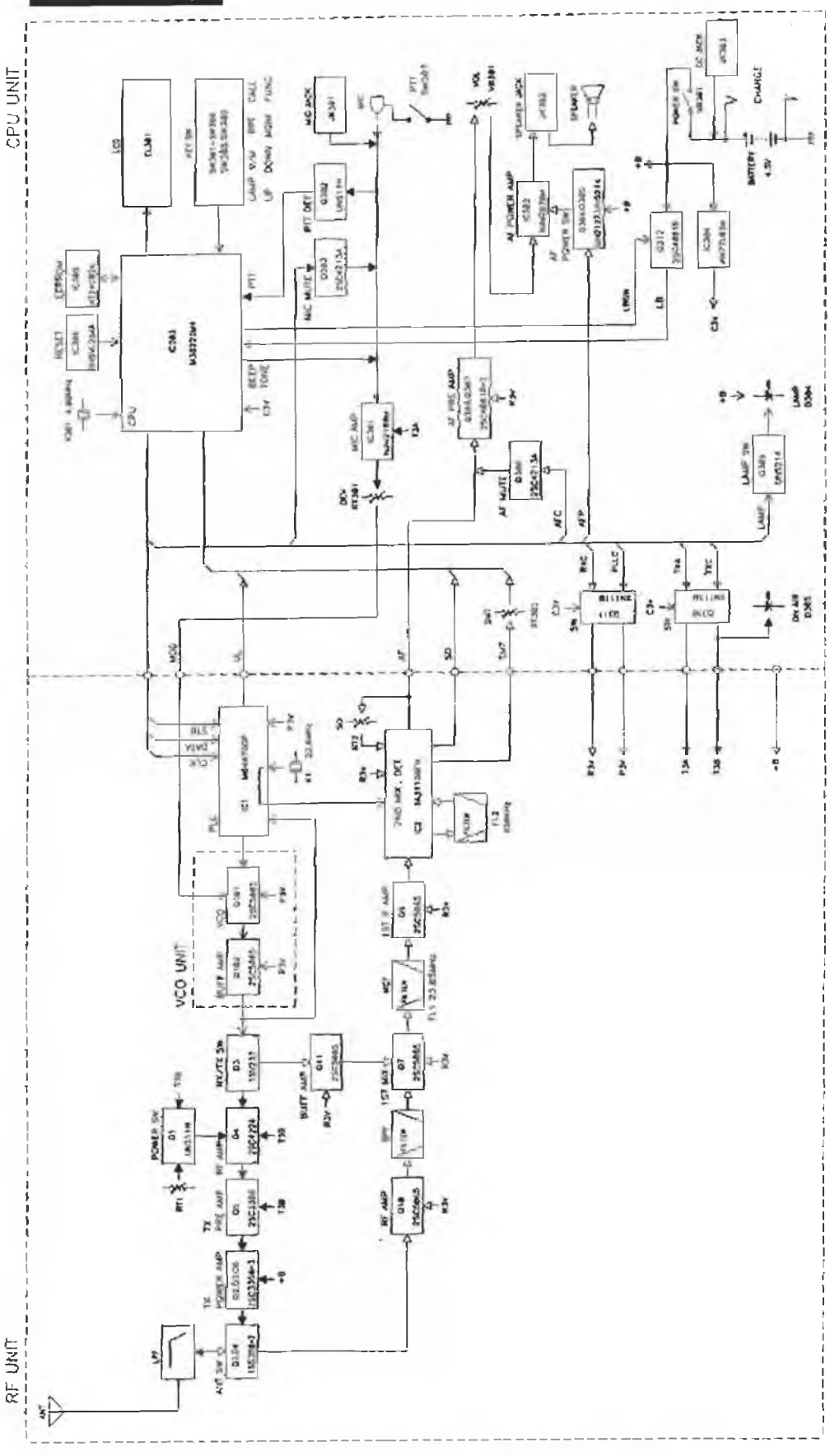


3) VCO Unit For DJ-S11T/E



BLOCK DIAGRAM

For DJ-S11T/E



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